

=> FILE WPIX
FILE 'WPIX' ENTERED AT 16:57:05 ON 31 AUG 2006
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FILE LAST UPDATED: 25 AUG 2006 <20060825/UP>
MOST RECENT DERWENT UPDATE: 200655 <200655/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

=> D QUE L39

L2 32 SEA FILE=REGISTRY ABB=ON (27750-10-3/BI OR 7440-47-3/BI OR
132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26
-7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR
59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR
7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI
OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI
OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR
761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36
-2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR
989-51-5/BI)
L4 1 SEA FILE=REGISTRY ABB=ON L2 AND GHRELIN
L5 1 SEA FILE=REGISTRY ABB=ON 27750-10-3
L32 1733 SEA FILE=MEDLINE ABB=ON L4 OR GHRELIN
L33 116 SEA FILE=MEDLINE ABB=ON L5 OR HYDROXYCITRIC?
L39 1 SEA FILE=WPIX ABB=ON L32 AND L33

=> D L39 FULL

L39 ANSWER 1 OF 1 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2004-689234 [67] WPIX
DNC C2004-244283
TI Composition useful for reducing and maintaining body weight in person or
other mammal by decreasing ghrelin levels comprises
hydroxycitric acid.
DC B05
IN BAGCHI, D; KOTHARI, S; KOTHARI, S C
PA (INTE-N) INTERHEALTH NUTRACEUTICALS INC
CYC 109
PI US 2004186181 A1 20040923 (200467)* 8 A61K031-19
WO 2004085462 A2 20041007 (200467) EN C07K000-00
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE
LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ

applicant

OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG
US UZ VC VN YU ZA ZM ZW

TW 2004027447 A 20041216 (200615) A61K031-194
ADT US 2004186181 A1 Provisional US 2003-456592P 20030321, US 2004-805129
20040319; WO 2004085462 A2 WO 2004-US8474 20040319; TW 2004027447 A TW
2004-107527 20040319

PRAI US 2003-456592P 20030321; US 2004-805129 20040319

IC ICM A61K031-19; A61K031-194; C07K000-00

ICS A23L001-30; A61K031-455; A61K031-555; A61K031-704; A61K033-24;

A61K035-78; A61P003-04; C07C059-245

AB US2004186181 A UPAB: 20041019

NOVELTY - A composition (C1) for decreasing **ghrelin** levels in
person or other mammal comprises **hydroxycitric acid**.

ACTIVITY - Anorectic; Antilipemic.

MECHANISM OF ACTION - None given.

USE - For reducing and maintaining body weight in a person or other
mammal (claimed).

ADVANTAGE - Decreases feelings of hunger and regulates food intake,
increases fat metabolism for effective weight management. The composition
provides the additional advantage of alleviating symptoms in human and
other mammals and improving other health factors e.g. increases serum
serotonin levels; niacin bound chromium complex helps to reduce LDL
cholesterol in humans by an average of 14%; gymnemic acid facilitates
insulin release from beta cells into the blood stream by increasing beta
cell membrane permeability and inhibits the absorption of sugar molecules
in the intestines during digestion thus reduces blood sugar levels; green
tea extract protects carcinogens, reduces cholesterol levels and blocks
the attachment of the bacteria associated with dental cavities to the
teeth.

Dwg.0/0

TECH US 2004186181 A1UPTX: 20041019

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition:

Hydroxycitric acid is bound to group IA/IIA metal (e.g. Na, K, Cs,
Fr, Be, Mg, Ca, Sr, Ba, or Ra) to form single, double or triple salt
(preferably Ca or K salts) further comprises gymnemic acid (10 - 1000,
preferably 100 mg), green tea extract (20 - 2000 mg) or chromium
(preferably niacin-bound chromium) (10 - 1000 micrograms). The green tea
extract comprises epigallocatechin gallate, caffeine and theanine
(preferably epigallocatechin gallate (400 mg)).

TECHNOLOGY FOCUS - BIOLOGY - Preferred Components: **Hydroxycitric**
acid is derived from plant *Garcinia cambogia*. Gymnemic acid is derived
from plant *Gymnema sylvestre*.

ABEX US 2004186181 A1UPTX: 20041019

ADMINISTRATION - The dosage is 900-4500 (preferably 2000 - 3500 especially
2700 -2800) mg (claimed) three times a day approximately 30 - 60 minutes
before meal. The composition is administered orally in the form of dietary
supplements e.g. pill, tablet, capsule, lozenge, gum, liquid, or food
beverage products.

FS CPI

FA AB; DCN

MC CPI: B04-A08C2; B04-A10; B05-A03B; B06-A01; B06-D09; B07-A02A; B10-B02J;
B10-C02; B14-D02A2; B14-E12; B14-F09; B14-J03

=> FILE HCAPLU

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FILE COVERS 1907 - 31 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L26

L2 32 SEA FILE=REGISTRY ABB=ON (27750-10-3/BI OR 7440-47-3/BI OR 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26-7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36-2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR 989-51-5/BI)

L3 12 SEA FILE=REGISTRY ABB=ON L2 AND SALT

L4 1 SEA FILE=REGISTRY ABB=ON L2 AND GHRELIN

L5 1 SEA FILE=REGISTRY ABB=ON 27750-10-3

L6 18 SEA FILE=REGISTRY ABB=ON L2 NOT (L3 OR L4 OR L5)

L7 12 SEA FILE=REGISTRY ABB=ON L6 AND 1-2/M

L8 11 SEA FILE=REGISTRY ABB=ON L7 NOT 1/CR

L9 1957 SEA FILE=HCAPLUS ABB=ON L4 OR GHRELIN

L10 42 SEA FILE=HCAPLUS ABB=ON L3

L11 29 SEA FILE=HCAPLUS ABB=ON L5/D

L12 30162 SEA FILE=HCAPLUS ABB=ON L8/D

L13 4 SEA FILE=HCAPLUS ABB=ON L11 AND L12

L14 1 SEA FILE=HCAPLUS ABB=ON L9 AND (L10 OR L13)

L16 352 SEA FILE=HCAPLUS ABB=ON L9(3A) (DECREAS? OR LOW?)

L17 237 SEA FILE=HCAPLUS ABB=ON L5

L18 1 SEA FILE=HCAPLUS ABB=ON L16 AND L17

L20 2 SEA FILE=HCAPLUS ABB=ON L9 AND GARCINIA

L21 2 SEA FILE=HCAPLUS ABB=ON L14 OR L18 OR L20

L22 1 SEA FILE=HCAPLUS ABB=ON L16 AND (HYDROXYCITRIC? OR HYDROXY(W) CITRIC?)

L23 2 SEA FILE=HCAPLUS ABB=ON L21 OR L22

L24 19 SEA FILE=HCAPLUS ABB=ON (L10 OR L13) AND WEIGHT?

L25 14 SEA FILE=HCAPLUS ABB=ON L24 AND PHARMA?/SC,SX

L26 15 SEA FILE=HCAPLUS ABB=ON L23 OR L25

=> FILE MEDLINE

FILE 'MEDLINE' ENTERED AT 16:59:44 ON 31 AUG 2006

FILE LAST UPDATED: 30 Aug 2006 (20060830/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
See also:

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L34

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L2      32 SEA FILE=REGISTRY ABB=ON (27750-10-3/BI OR 7440-47-3/BI OR
      132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26
      -7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR
      59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR
      7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI
      OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI
      OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR
      761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36
      -2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR
      989-51-5/BI)
L4      1 SEA FILE=REGISTRY ABB=ON L2 AND GHRELIN
L5      1 SEA FILE=REGISTRY ABB=ON 27750-10-3
L32     1733 SEA FILE=MEDLINE ABB=ON L4 OR GHRELIN
L33     116 SEA FILE=MEDLINE ABB=ON L5 OR HYDROXYCITRIC?
L34     0 SEA FILE=MEDLINE ABB=ON L32 AND L33
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=> D L26 BIB ABS IND HITSTR 1-15

L26 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:269132 HCAPLUS

DN 144:338068

TI Composition and method to optimize and customize nutritional supplement formulations by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes

IN Blum, Kenneth; Meshkin, Brian; Downs, Bernard William

PA USA

SO U.S. Pat. Appl. Publ., 80 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006062859	A1	20060323	US 2005-197980	20050805
PRAI	US 2004-599829P	P	20040805		

AB The invention relates to a composition and custom business model and methods to measure genetic and metabolomic contributing factors affecting disease diagnosis, stratification, and prognosis, as well as the metabolism, efficacy and/or toxicity associated with specific vitamins, minerals, herbal supplements, homeopathic ingredients, and other ingredients for the purposes of customizing a subject's nutritional supplements with custom formulations to optimize health outcomes. For example, Synaptose formula comprised DLPA 2000 mg, various glyconutrients including, but not limited to one or more of glucose, fucose, mannose, galactose, xylose, N-acetylglucosamine, N-acetylgalactosamine, and N-acetylneuraminic acid (sialic acid), all of which can be present as either monosaccharides or complexed as oligo- and/or polysaccharides in various foodstuffs including but not limited to aloe, fenugreek, numerous species of medicinal mushrooms, western larch (primarily tree sap and bark), and many more glycoside-rich botanical substances. In addition, the formula contained arabinose, arabinogalactans, and other polyglycan-rich substances, L-glutamine 150 mg, L-tyrosine 750 mg, 5-hydroxytryptophan 100 mg, chromium salt up to 1000 µg or more, Rhodiola rosea 200 mg, passion flower 100 mg, vitamin B6 20 mg, magnolia flower 20 mg, minerals (calcium 275-750 mg, magnesium at least 100-750 mg, and potassium at least 250-2000 mg), and salts of (-)-hydroxycitric acid up to 3000 mg.

INCL 424725000; 424765000; 424769000; 435006000; 514002000; 514054000; 514171000

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 1, 17, 18

ST nutritional supplement optimization genomics metabolomics diagnosis metab therapy; glyconutrient supplement optimization genomics metabolomics diagnosis metab therapy; nutrigenomics diagnosis metab therapy

IT Uncoupling protein

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(2, gene for, polymorphism in; optimization and customization of

nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Apolipoproteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (A-I, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transport proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ABCC8 (ATP-binding cassette transporter sub-family C member 8), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ACE, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ADRA2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ADRA2A, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ALdB, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ANG, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ANKK1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ANKK1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(APOE, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (AgRP, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (Bdnf, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Berberis; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Bryonia; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (BsmI, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (C825T, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (CART (cocaine- and amphetamine-regulated transcript), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (CART, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (CNR1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

- RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CNRA4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CNRA4, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(COMT, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ChREBP, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ChREBP, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Chamonlia; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DAT1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DBH, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DRD2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Muscular dystrophy
(Duchenne; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1, gene for, polymorphism in; optimization and customization of

nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (D1A, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (D2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (D3, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (D4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (D5, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Apolipoproteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (E, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (E23K, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT G protein-coupled receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (EDG-2 (endothelial differentiation gene 2), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (EGR1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ERBB2, polymorphism in; optimization and customization of nutritional

supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Edg2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Egr-1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT *Garcinia mangostana*

(Extract; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Immunophilins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FKBP (FK 506-binding protein), FKBP5, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Ferrum Phos; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Fgfr2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Fkbp5, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FokI, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GAB1 (GRB2-associated binder 1), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABRA3, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to

- disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABRB3, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFPT1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFPT2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT-4 (glucose transporter 4), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT4, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Gab1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Gelsemium; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Ghrelin, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA-DRB, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(HLA-DRB1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HLA-DRB1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Heat-shock proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HSP 56, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HTR1A, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HTR1D, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HTR2A, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HTR2C, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HTT, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (Hpcall, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ID2 (inhibitor of differentiation 2), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(Id2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (LNC2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (LNC2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (MAOA, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (MAOA, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (MGPAT, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MGPAT, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Histocompatibility antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study) (MHC (major histocompatibility complex), class II, β chain, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Glycoproteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (MOG (myelin oligodendrocyte glycoprotein), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (MOG, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Glycoproteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(MOG4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(MOG4, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(MTHFR, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Mc3R:UCP1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Mc4R, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NET, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Glutamate receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NMDA-binding, NMDAR-1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NMDAR1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NYP, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(OBR, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

- outcomes)
- IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PDGS, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PDGS, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(POMC, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PPAR γ , polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PTPN1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PTPN22, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Bone, disease
(Paget's; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Blood vessel, disease
(Raynaud's phenomenon; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Arthritis
(Reiter's syndrome; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SREBP-1 (sterol regulatory element-binding protein 1), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(STS, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (Sgk, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (Sgk1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (TCP-1 (T-complex protein 1), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (TCP1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (TD02, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (adiponitrins; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (agouti-related, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (aloe; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Disease, animal

(arthropathy; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Mental and behavioral disorders

(attention deficit hyperactivity disorder; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification,

- prognosis, metabolism, and therapeutic outcomes)
- IT Natural products, pharmaceutical
 RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (belladonna; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Fats and Glyceridic oils, biological studies
 RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (borage seed; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Cartilage
 (bovine; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Neurotrophic factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (brain-derived, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Proteoglycans, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (brevican, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Transcription factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (c-fos, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (c-fos, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Transcription factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (c-jun, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (c-jun, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Transcription factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (c-myc, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal

- RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-myc, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Coral
(calcium; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Triterpenes
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(carboxy, boswellic acids; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Shark
(cartilage; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Uncaria tomentosa
(cat's claw; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(currant, Ribes nigrum seed; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Mental and behavioral disorders
(depression; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Proteins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(desnutrins; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Joint, anatomical
(disease; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(disorders; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dopamine transporter, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evening primrose; optimization and customization of nutritional

supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

- IT Boswellia
- Hoodia
- Hoodia gordonii
- Lagerstroemia speciosa
- Momordica charantia
- Rhodiola
- Sedum roseum
- Vaccinium myrtillus
- (extract; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Fats and Glyceridic oils, biological studies
- RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
- (fish; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT 5-HT receptors
- Aggrecans
- Cell adhesion molecules
- Decorins
- GABA receptors
- Glucocorticoid receptors
- Interleukin 10
- Interleukin 1 α
- Interleukin 1 β
- Interleukin 8
- Leptin receptors
- Potassium channel
- Ras proteins
- Tumor necrosis factors
- RL: BSU (Biological study, unclassified); BIOL (Biological study)
- (gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Vitamin D receptors
- RL: BSU (Biological study, unclassified); BIOL (Biological study)
- (genes for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Disease, animal
- (genetic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Fats and Glyceridic oils, biological studies
- RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
- (grape seed; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Tea products
- (green; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Tinospora cordifolia

- (gulvel; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (hippocalcin-like 1, gene for, polymorphism in; optimization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Aconitum
RL: BIOL (Biological study); USES (Uses) (homeopathic preparation; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Drug delivery systems
(homeopathic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Chromosome
(human 2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Collagens, biological studies
Gelatins, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hydrolyzates; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Opioids
RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Syzygium cumini
(jambolan; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gymnema sylvestre
(leaf; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Embryophyta
(medicinal plant; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Mushroom
(medicinal; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Pituitary hormone receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (melanocortin receptor 3, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Pituitary hormone receptors

- RL: BSU (Biological study, unclassified); BIOL (Biological study)
(melanocortin receptor 4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Disease, animal
(metabolomic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Perfumes
(myrrh, Guggul; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Disease, animal
(neurogenobolic deficiency syndrome; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Diabetes mellitus
(non-insulin-dependent; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(norepinephrine transporter, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ob, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Resins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(olibanum, Salai Guggal; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT Acanthopanax senticosus
Alcoholism
Ananas comosus
Anxiety
Appetite depressants
Arthritis
Asthma
Astragalus
Autoimmune disease
Bacopa monnieri
Borago officinalis
Boswellia serrata
Camellia sinensis
Cardiovascular system, disease
Centella asiatica
Citrus aurantium
Commiphora mukul

Curcuma longa
Diabetes mellitus
Diagnosis
Dietary supplements
Dioscorea
Dioscorea villosa
Disease, animal
Drug delivery systems
Drug dependence
Drug toxicity
Echinacea
Flaxseed
Ganoderma lucidum
Genetic polymorphism
Ginkgo
Ginkgo biloba
Harpagophytum procumbens
Human
Hypericum perforatum
Hypertension
Inflammation
Insomnia
Larix
Lentinula edodes
Ligustrum
Linum usitatissimum
Lupus erythematosus
Lyme disease
Magnolia
Metabolism, animal
Mutation
Neoplasm
Obesity
Oenothera
Oenothera biennis
Osteoarthritis
Osteoporosis
Oxidative stress, biological
Pain
Panax
Panax ginseng
Panax quinquefolium
Parthenium hysterophorus
Passiflora
Perna canaliculus
Perna viridis
Phellodendron amurense
Piper methysticum
Primula
Pterocarpus marsupium
Rheumatic fever
Rheumatoid arthritis
Rhododendron
Ribes nigrum
Salix alba
Schisandra
Simulation and Modeling
Sleep disorders
Stress, animal
Tabebuia

Therapy
Tonga
Trigonella foenum-graecum
Tripterygium wilfordii
Urtica dioica
Valeriana
Valeriana officinalis
Zingiber officinale
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT DNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Carbohydrate metabolism disorders
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Amino acids, biological studies
Collagens, biological studies
Gelatins, biological studies
Linseed oil
Mineral elements, biological studies
Monosaccharides
Natural products, pharmaceutical
Oligosaccharides, biological studies
Polysaccharides, biological studies
Tannins
Vitamins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Tobacco smoke
(overcoming dependence of; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Rheumatic diseases
(palindromic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Mental and behavioral disorders
(post-traumatic stress disorder; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Ovarian cycle
(premenstrual syndrome; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Hair
Mental activity

Nail (anatomical)

Skin

(promotion of health of; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Arthritis

(reactive; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Vitis vinifera

(seeds; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Genetic polymorphism

(single nucleotide; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (sortilin-1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Neurotransmitters

RL: BSU (Biological study, unclassified); BIOL (Biological study) (synthesis precursors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Carboxylic acids, biological studies

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(triterpene, boswellic acids; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Neurotensin receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Fibroblast growth factor receptors

Neurotensin receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT1A, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT1D, gene for, polymorphism in; optimization and customization

of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT2A, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT2B, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT2C, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type 5-HT7, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Angiotensin receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type AT1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Cannabinoid receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (type CB1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Collagens, biological studies

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(type II; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Blood vessel, disease

Inflammation

(vasculitis, hypersensitivity; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Interferons

RL: BSU (Biological study, unclassified); BIOL (Biological study) (α , gene for, polymorphism in; optimization and customization of

nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) ($\alpha 2$, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) ($\alpha 2A$, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (β -, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) ($\beta 3AR$, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) ($\beta 3$, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Peroxisome proliferator-activated receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (γ , gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Peroxisome proliferator-activated receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) ($\gamma 2$, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 54-11-5, Nicotine

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (dependence to and treatment with; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 17031-92-4, Calcium pyrophosphate dihydrate

RL: BSU (Biological study, unclassified); BIOL (Biological study) (disorder; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 9000-83-3, ATPase 9012-25-3, Catechol O-methyltransferase 9013-38-1, Dopamine β -hydroxylase 9014-51-1, Tryptophan 2,3-dioxygenase 9015-82-1, Angiotensin converting enzyme 9025-62-1, Steroid sulfatase

- 9028-86-8, Aldehyde dehydrogenase 9029-96-3, Glycerol 3-phosphate acyltransferase 9030-45-9, Glutamine-fructose 6-phosphate amidotransferase 9031-91-8, Glucosamine 6-phosphate acetyltransferase 9035-51-2, Cytochrome P 450, biological studies 9041-46-7, 11 β -Hydroxysteroid dehydrogenase, type 1 66796-54-1, Proopiomelanocortin 71822-25-8, Methylene tetrahydrofolate reductase 82785-45-3, Neuropeptide Y 88402-55-5, Prodynorphin 90880-95-8, Proenkephalin 178037-70-2, Protein kinase SGK-1 300865-11-6, Protein tyrosine phosphatase PTPN1 301156-78-5, Protein tyrosine phosphatase Lyp 304853-26-7, Ghrelin 330597-62-1, CYP2D6
- RL: BSU (Biological study, unclassified); BIOL (Biological study) (gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT 9000-81-1, Acetylcholinesterase 9001-08-5, Cholinesterase
- RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT 51-84-3, Acetylcholine, biological studies 39379-15-2, Neurotensin
- RL: BSU (Biological study, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
- IT 50-81-7, Vitamin C, biological studies 50-99-7, D-Glucose, biological studies 53-43-0, DHEA 54-47-7, Pyridoxal-5'-phosphate 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 58-86-6, Xylose, biological studies 59-23-4, Galactose, biological studies 59-30-3, Folic acid, biological studies 59-43-8, Thiamine, biological studies 59-92-7, biological studies 60-18-4, L-Tyrosine, biological studies 62-49-7, Choline 63-91-2, L-Phenylalanine, biological studies 66-84-2, Glucosamine hydrochloride 67-68-5, DMSO, biological studies 67-71-0, Methylsulfonylmethane 73-22-3, L-Tryptophan, biological studies 73-31-4, Melatonin 94-07-5, Synephrine 117-39-5, Quercetin 131-48-6, N-Acetylneuraminic acid 147-81-9, Arabinose 150-30-1, DLPA 299-42-3, Ephedrine 300-62-9D, Amphetamine, derivs. 328-38-1, D-Leucine 501-52-0, Hydrocinnamic acid 506-26-3, γ -Linolenic acid 541-15-1, L-Carnitine 673-06-3, D-Phenylalanine 989-51-5, EGCG 1406-18-4, Vitamin E 1811-31-0, N-Acetylgalactosamine 2438-80-4, Fucose 3416-24-8, Glucosamine 3458-28-4, D-Mannose 4350-09-8, 5-Hydroxytryptophan 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-09-7, Potassium, biological studies 7440-47-3D, Chromium, salts 7440-70-2, Calcium, biological studies 7512-17-6, N-Acetylglucosamine 7693-13-2, Calcium citrate 7778-49-6, Potassium citrate 7779-25-1, Magnesium citrate 8059-24-3, Vitamin B6 9001-73-4, Papain 9004-61-9, Hyaluronic acid 9007-28-7, Chondroitin sulfate 9036-66-2, Arabinogalactan 12001-76-2, Vitamin B complex 13539-59-8, Cinnamin 14007-45-5, Potassium aspartate 16351-10-3, Manganese ascorbate 18962-61-3, Magnesium aspartate 21059-46-1, Calcium aspartate 27750-10-3, (-)-Hydroxycitric acid 27750-10-3D, (-)-Hydroxycitric acid, salts 27774-13-6, Vanadyl sulfate 29031-19-4, Glucosamine sulfate 29908-03-0, S-Adenosyl-L-methionine 31271-07-5, γ -Mangostin 39345-92-1, Chromium chloride 40816-51-1 64660-84-0, Cetyl-M 102518-79-6, Huperzine A 140947-78-0 150977-36-9, Bromelain 316129-64-3, Protokin 880087-81-0 880150-86-7, Boswellin 880150-96-9, Sierrasil 880150-98-1, AlgaeCal 880151-04-2, Synaptamine 880260-05-9, Synaptose

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 50-67-9, Serotonin, biological studies 51-61-6, Dopamine, biological studies 56-12-2, γ -Aminobutyric acid, biological studies 3040-38-8, Acetylcarnitine

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(precursors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 304853-26-7, Ghrelin

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

RN 304853-26-7 HCAPLUS

CN Ghrelin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L26 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1330533 HCAPLUS

DN 144:74811

TI New dietary supplement composition for obesity and inflammation

IN Gokaraju, Ganga Raju; Gokaraju, Rama Raju; Gottumukkala, Venkata Subbaraju; Somepalli, Venkateswarlu

PA India

SO U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005282772	A1	20051222	US 2005-155486	20050620
PRAI	US 2004-580723P	P	20040621		

AB The present invention relates to dietary supplement phytochem. compns., comprising calcium, potassium double salt of (-)-hydroxycitric acid and glucosamine hydrochloride, and optionally boswellic acids, curcuminoids, 5-hydroxytryptophan, chondroitin sulfate and L-carnitine. The claimed compns. are useful in dietary supplements, nutritional supplements or pharmaceutical preps. for weight loss and inflammatory epidemics. A phytochem. composition was prepared by mixing unit doses of the following components: calcium, potassium double salt of (-)-hydroxycitric acid (4 g), glucosamine hydrochloride (1.5 g) and boswellic acids (300 mg).

IC ICM A61K031-737

ICS A61K031-7008; A61K031-19

INCL 514054000; 514574000; 514062000; 514559000; 514419000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1, 17

ST dietary supplement obesity inflammation treatment; hydroxycitric acid glucosamine boswellic acid dietary supplement

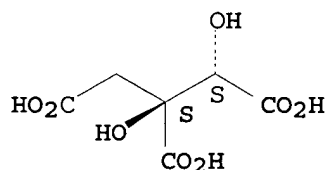
IT Triterpenes

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(carboxy, boswellic acids; new dietary supplement composition for obesity and inflammation)

- IT Ketones, biological studies
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (diketones, unsatd., curcuminoids; new dietary supplement composition for obesity and inflammation)
- IT Anti-inflammatory agents
 Antiobesity agents
 Antioxidants
 Arthritis
 Beverages
 Boswellia serrata
 Cardiovascular system, disease
 Cosmetics
 Curcuma longa
 Dietary supplements
 Inflammation
 Obesity
 (new dietary supplement composition for obesity and inflammation)
- IT Carboxylic acids, biological studies
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (triterpene, boswellic acids; new dietary supplement composition for obesity and inflammation)
- IT 66-84-2, Glucosamine hydrochloride 541-15-1, L-Carnitine 4350-09-8, 5-Hydroxytryptophan 7512-17-6, N-Acetyl glucosamine 9007-28-7, Chondroitin sulfate 27750-10-3D, (-)-Hydroxycitric acid, salts 29031-19-4, Glucosamine sulfate 449158-84-3 871707-10-7
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (new dietary supplement composition for obesity and inflammation)
- IT 449158-84-3
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (new dietary supplement composition for obesity and inflammation)
- RN 449158-84-3 HCAPLUS
- CN D-erythro-Pentanic acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

DN 143:235461
 TI Double salts of (-)-hydroxycitric acid with an amine and a group IIA metal
 IN Gokaraju, Ganga Raju; Gokaraju, Rama Raju; Gottumukkala, Venkata
 Subbaraju; Somepalli, Venkateswarlu; Pratha, Sridhar
 PA India
 SO PCT Int. Appl., 15 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005076747	A2	20050825	WO 2004-IN45	20040217
	WO 2005076747	A3	20060330		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2005209445	A1	20050922	US 2003-516107	20041130
PRAI	WO 2004-IN45	W	20040217		

OS MARPAT 143:235461

AB This invention relates to novel double salt of (-)-hydroxycitric acid with an amine and zinc or a group II A metal. These compds. are stable and water soluble and are used as nutraceuticals, **weight** reducing agents and in beverages. Thus, calcium glucosamine double salt of (-)-hydroxycitric acid was prepared by the treatment of the acid with glucosamine and Ca(OH)₂.

IC ICM C07C

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 17

ST amine hydroxycitric acid metal antiobesity prepn; group IIA metal hydroxycitrate antiobesity prepn

IT Beverages

Dietary supplements

(preparation of double salts of hydroxycitric acid with amine and group IIA metals)

IT Alcohols, uses

RL: NUU (Other use, unclassified); USES (Uses)

(preparation of double salts of hydroxycitric acid with amine and group IIA metals)

IT Obesity

(reduction; preparation of double salts of hydroxycitric acid with amine and group IIA metals)

IT Alkaline earth salts

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(with hydroxycitric acid; preparation of double salts of hydroxycitric acid with amine and group IIA metals)

IT 862895-72-5P 862895-73-6P 862895-74-7P 862895-75-8P 862895-76-9P
 862895-77-0P 862895-78-1P 862895-79-2P

RL: FFD (Food or feed use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of double salts of hydroxycitric acid with amine and group IIA metals)

IT 67-64-1, Acetone, uses 75-05-8, Acetonitrile, uses 109-99-9, THF, uses
 123-91-1, Dioxane, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (preparation of double salts of hydroxycitric acid with amine and group IIA
 metals)

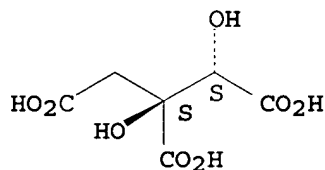
IT 66-84-2, Glucosamine hydrochloride 546-93-0, Magnesium carbonate
 1305-62-0, Calcium hydroxide, reactions 3416-24-8, Glucosamine
 3486-35-9, Zinc carbonate 14838-15-4, Norephedrine 27750-10-3,
 (-)-Hydroxycitric acid 106650-56-0, Sibutramine 449158-84-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of double salts of hydroxycitric acid with amine and group IIA
 metals)

IT 449158-84-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of double salts of hydroxycitric acid with amine and group IIA
 metals)

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentonic acid, 3-C-carboxy-2-deoxy-, calcium potassium salt
 (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

L26 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:259856 HCAPLUS
 DN 142:322762
 TI Enteric delivery of (-)-hydroxycitric acid
 IN Clouatre, Dallas L.; Dunn, James M.
 PA Glykon Technologies Group, LLC, USA
 SO PCT Int. Appl., 24 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005025544	A1	20050324	WO 2004-US29471	20040910
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

CA 2538929 AA 20050324 CA 2004-2538929 20040910
 PRAI US 2003-660805 A 20030911
 WO 2004-US29471 W 20040910

AB The present invention provides enteric (-)-hydroxycitric acid (HCA) comprising HCA and one or more acid-resistant hydrophobic polymer, stable dosage unit forms, uses thereof, as well as methods of making the same. In particular, HCA and the salts, esters and amides of HCA according to the invention are delivered via enteric vehicles, such as enteric-coated tablets, and also enteric and enteric-coated capsules and soft gelatin capsules (softgels). Enteric coatings may be applied externally to the HCA-containing dosage unit form or, in the case of capsules and soft gelatin capsules, the enteric compound also may be incorporated into the gelatin shell to yield an HCA-containing dosage unit form of the invention. The HCA-containing compns. are protected against acid degradation, lactonization and

undesirable ligand binding in select environments. The invention provides HCA-containing dosage unit forms useful to prevent or reduce the symptoms associated with a disease, disorder or condition such as obesity, wt gain, hunger, hyperlipemia, and postprandial lipemia. For example, a hard shell capsule was filled with 500 mg/potassium-calcium HCA and then coated with a formulation containing cellulose acetate phthalate 8.5%, di-Et phthalate 1.5%, acetone 45.0%, and denatured alc. 45.0%.

IC ICM A61K009-28
 ICS A61K009-30; A61K009-32; A61K009-34; A61K009-36; A61K009-48;
 A61K009-66

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

ST hydroxycitrate hydrophobic polymer enteric capsule tablet

IT Glycerides, biological studies

Monoglycerides

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (acetates; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Drug delivery systems

(capsules, enteric-coated; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Drug delivery systems

(capsules, soft, enteric-coated; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Antiobesity agents

Appetite depressants

Hypolipemic agents

(enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Acrylic polymers, biological studies

Polyoxyalkylenes, biological studies

Shellac

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Coating materials

Drug delivery systems

(enteric; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Glycols, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters; enteric delivery of hydroxycitric acid and derivs. for
treatment of metabolic disorders)

IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(reduction of blood lipids; enteric delivery of hydroxycitric acid and
derivs. for treatment of metabolic disorders)

IT Hyperlipidemia
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(reduction of postprandial lipemia; enteric delivery of hydroxycitric acid
and derivs. for treatment of metabolic disorders)

IT Hunger
Obesity
(reduction of symptoms associated with; enteric delivery of hydroxycitric
acid
and derivs. for treatment of metabolic disorders)

IT Drug delivery systems
(tablets, enteric-coated; enteric delivery of hydroxycitric acid and
derivs. for treatment of metabolic disorders)

IT 79-41-4D, Methacrylic acid, esters, polymers
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Eudragit; enteric delivery of hydroxycitric acid and derivs. for
treatment of metabolic disorders)

IT 26780-50-7, Poly(glycolide-co-lactide)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Resomer RG; enteric delivery of hydroxycitric acid and derivs. for
treatment of metabolic disorders)

IT 27750-10-3, (-)-Hydroxycitric acid 27750-10-3D, (-)-Hydroxycitric acid,
derivs. 64913-19-5 185196-38-7 213385-58-1
449158-84-3 848047-98-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(enteric delivery of hydroxycitric acid and derivs. for treatment of
metabolic disorders)

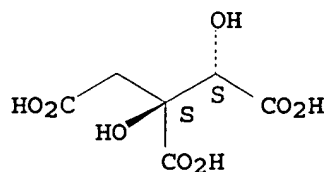
IT 50-21-5D, Lactic acid, polymers 57-55-6D, 1,2-Propanediol,
 β -cyclodextrin ethers 77-93-0, Triethyl citrate 77-94-1, Tributyl
citrate 79-14-1D, Glycolic acid, polymers 84-66-2, Diethyl phthalate
102-76-1, Triacetin 110-16-7D, Maleic acid, ester with cellulose
7585-39-9, β -Cyclodextrin 7585-39-9D, β -Cyclodextrin, ethers
with propanediol 9004-35-7D, ester with maleic acid 9004-38-0,
Cellulose acetate phthalate 9004-57-3, Ethyl cellulose 9050-31-1,
Hydroxypropyl methyl cellulose phthalate 10016-20-3,
 α -Cyclodextrin 17465-86-0, γ -Cyclodextrin 25322-68-3,
Polyethylene glycol 53237-50-6 106392-12-5, Poloxamer
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enteric delivery of hydroxycitric acid and derivs. for treatment of
metabolic disorders)

IT 9012-83-3, Citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(reduction of cytoplasmic; enteric delivery of hydroxycitric acid and
derivs. for treatment of metabolic disorders)

IT 64913-19-5 185196-38-7 213385-58-1
449158-84-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(enteric delivery of hydroxycitric acid and derivs. for treatment of
metabolic disorders)

RN 64913-19-5 HCAPLUS
CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

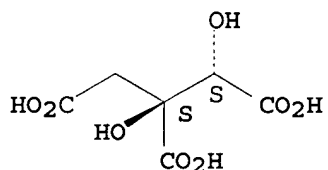


●x Na

RN 185196-38-7 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

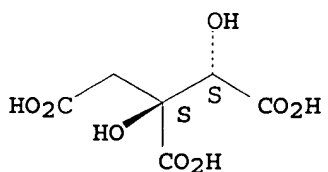


●x K

RN 213385-58-1 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

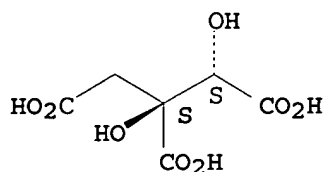


●x Ca

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:36560 HCAPLUS
DN 142:127634
TI Treating cachexia and excessive catabolism with (-)-hydroxycitric acid
IN Clouatre, Dallas L.
PA USA
SO U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005009919	A1	20050113	US 2003-616321	20030707
WO 2005007152	A1	20050127	WO 2004-US21542	20040702

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

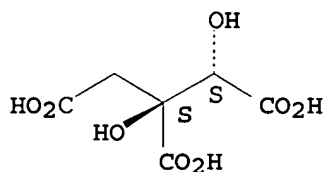
PRAI US 2003-616321 A 20030707

AB (-)-Hydroxycitric acid (including the forms of its various salts) is useful for treating and ameliorating cachexia, health-threatening catabolism and unhealthful **weight** loss, such as is characteristic of sarcopenia. The dosage will depend on factors such as the starting **weight** of the individual and the percentage of the calories in the diet derived from fats. On a 30 percent fat diet, an efficacious daily dosage for most individuals will be between 250 mg and 3 g per day. It may prove beneficial to deliver the desired dosage only once per day, preferably prior to the noon meal. The **weight**-gain effects of HCA are compromised by the actions compds. such as caffeine and ephedrine, hence these should be avoided. Due to the biphasic characteristics of HCA, there is an obvious overlap between dosages that can lead to

weight gain and the higher dosages that can lead to weight loss in those who are above their ideal body wts. There is little or no evidence that HCA ingested even in quite large amts. causes significant weight loss in individuals who are at or below their idea wts. or exhibit a body mass index (BMI) at or below 20. It is to be expected that dosage will need to be matched to the current state of a given individual suffering from cachexia, catabolism or sarcopenia.

IC ICM A61K031-19
ICS A61K031-366
INCL 514574000; 514460000
CC 1-12 (Pharmacology)
ST cachexia catabolism wt loss sarcopenia treatment hydroxycitrate
IT Appetite
Cachexia
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Metabolism
(catabolic; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Drug delivery systems
(controlled-release; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Body weight
(loss; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Drug delivery systems
(tablets; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT 50-22-6, Corticosterone 9004-10-8, Insulin, biological studies
169494-85-3, Leptin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT 27750-10-3, (-)-Hydroxycitric acid 27750-10-3D, (-)-Hydroxycitric acid, esters amides, and salts 27750-13-6, (-)-Hydroxycitric acid lactone
64913-19-5 132436-67-0 185196-38-7
213385-58-1 449158-84-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT 64913-19-5 132436-67-0 185196-38-7
213385-58-1 449158-84-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
RN 64913-19-5 HCAPLUS
CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

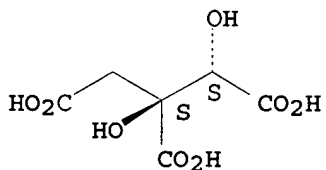
Absolute stereochemistry. Rotation (-).



●x Na

RN 132436-67-0 HCAPLUS
CN D-threo-Pentamic acid, 3-C-carboxy-2-deoxy-, magnesium salt (9CI) (CA INDEX NAME)

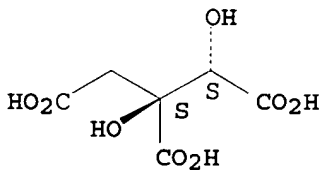
Absolute stereochemistry. Rotation (-).



●x Mg

RN 185196-38-7 HCAPLUS
CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

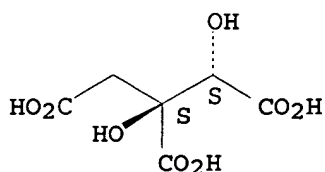
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

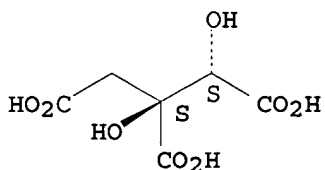


●x Ca

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

L26 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:1059147 HCAPLUS

DN 142:43775

TI Method and composition for stable and controlled delivery of
(-)-hydroxycitric acid

IN Clouatre, Dallas L.; Dunn, James M.

PA Glykon Technologies Group, Llc, USA

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004105733	A1	20041209	WO 2004-US17187	20040528
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,				

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

CA 2527133 AA 20041209 CA 2004-2527133 20040528

EP 1633328 A1 20060315 EP 2004-753908 20040528

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2006141030 A1 20060629 US 2005-287905 20051128

PRAI US 2003-447992 A 20030529

WO 2004-US17187 W 20040528

AB The present invention provides stable encapsulated (-)-hydroxycitric acid ('HCA')-containing compns. and methods of making the same. A method is provided by which the hygroscopic salts of HCA in their relatively pure and active forms, including especially the potassium salt, but also including the sodium salt, are rendered non-hygroscopic and stable (i.e., not prone to lactonization, not readily subject to attachment to ligands which inhibit absorption or lead to excretion, and so forth) such that these HCA salts might be included in dry delivery formats, liquid delivery and in controlled-release vehicles. The nonhygroscopic salts of HCA and its derivs. likewise may be protected against acid degradation, lactonization and undesirable ligand binding when exposed to acidic environments or other challenging conditions. The method taught herein can be employed to reduce the polar/ionic qualities of HCA salts and derivs. when presented to the intestinal lumen to provide advantages in absorption.

IC ICM A61K009-20

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

ST hydroxycitrate stable controlled delivery

IT Acrylic polymers, biological studies

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)

(Eastacryl; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Lipids, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (blood; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Drug delivery systems

(caplets; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Drug delivery systems

(capsules; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Drug delivery systems

(controlled-release; method and composition for stable and controlled
 delivery of (-)-hydroxycitric acid)

IT Drug delivery systems

(enteric; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Metabolism, animal

(fat; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Body weight

(loss; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Appetite depressants

Beverages

Binders

Biological transport

Human

Hygroscopicity
Intestine
Lubricants
Permeation enhancers
Stability
 (method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Gelatins, biological studies
Kaolin, biological studies
Polyesters, biological studies
Polyoxyalkylenes, biological studies
Polyurethanes, biological studies
Shellac
Waxes
Zeins
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
 (method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Drug delivery systems
 (microcapsules; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Plasticizers
 (polyacrylate; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Hyperlipidemia
RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (postprandial; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Drug delivery systems
 (powders; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Drug delivery systems
 (slow-release; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Drug delivery systems
 (sustained-release; method and composition for stable and controlled
 delivery of (-)-hydroxycitric acid)

IT Drug delivery systems
 (tablets; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT Fats and Glyceridic oils, biological studies
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
 (vegetable, hydrogenated; method and composition for stable and controlled
 delivery of (-)-hydroxycitric acid)

IT Oils
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
 (volcanic; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT 9003-20-7, Polyvinyl acetate
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
 (Kollicoat SR; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT 9012-83-3, Citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (inhibitors; method and composition for stable and controlled delivery of
 (-)-hydroxycitric acid)

IT 57-11-4, Stearic acid, biological studies 57-55-6, Propylene glycol, biological studies 77-93-0, Triethyl citrate 79-10-7D, Acrylic acid, copolymers 79-10-7D, Acrylic acid, polymers 79-41-4D, Methacrylic acid, copolymers 109-43-3, Dibutyl sebacate 127-09-3, Sodium acetate 143-19-1, Sodium oleate 151-21-3, Sodium lauryl sulfate, biological studies 328-39-2, Leucine 532-32-1, Sodium benzoate 557-04-0, Magnesium stearate 822-16-2, Sodium stearate 1592-23-0, Calcium stearate 3097-08-3, Magnesium lauryl sulfate 4070-80-8, Pruv 7647-14-5, Sodium chloride, biological studies 7757-93-9, Dicalcium phosphate 7758-87-4, Tricalcium phosphate 9000-11-7, Carboxy methyl cellulose 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9002-89-5 9002-96-4, d- α -Tocopheryl polyethylene glycol succinate 9003-07-0, Polypropylene 9003-21-8, Polymethyl acrylate 9003-39-8, Polyvinylpyrrolidone 9003-42-3, Polyethylmethacrylate 9003-44-5, Polyvinyl isobutyl ether 9003-63-8, Polybutyl methacrylate 9004-34-6, Cellulose, biological studies 9004-36-8, Cellulose acetate butyrate 9004-38-0, Cellulose acetate phthalate 9004-39-1, Cellulose acetate propionate 9004-44-8D, Cellulose phthalate, hydroxymethylpropylmethyl derivative 9004-48-2, Cellulose propionate 9004-57-3, Ethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropylmethyl cellulose 9004-67-5, Methylcellulose 9005-25-8, Potato starch, biological studies 9011-14-7, Polymethylmethacrylate 9011-15-8, Polyisobutyl methacrylate 9012-09-3 9050-31-1, Hydroxypropyl methylcellulose phthalate 9063-38-1 10043-35-3, Boric acid, biological studies 14807-96-6, Talc, biological studies 25038-59-9, biological studies 25087-17-6, Polyhexyl methacrylate 25189-01-9, Polyphenyl methacrylate 25322-68-3, Polyethylene oxide 25322-68-3D, Peg, conjugated 25719-52-2, Polylauryl methacrylate 25986-77-0, Polyoctadecyl acrylate 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-32-3, Polyisopropyl acrylate 26124-68-5, Polyglycolic acid 26335-74-0, Polyisobutyl acrylate 31566-31-1, Glycerol monostearate 37200-12-7, Polyisodecyl methacrylate 53237-50-6 74811-65-7, Primellose 596795-01-6, Kollicoat IR

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT 8030-84-0, HCAActive 27750-10-3, (-)-Hydroxycitric acid 185196-38-7 213385-58-1 449158-84-3

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

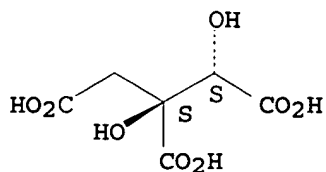
IT 185196-38-7 213385-58-1 449158-84-3

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

RN 185196-38-7 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

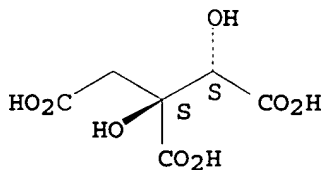
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
 CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

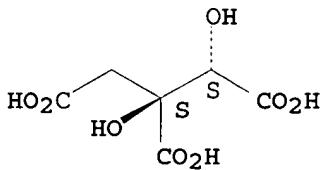
Absolute stereochemistry. Rotation (-).



●x Ca

RN 449158-84-3 HCAPLUS
 CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:1015841 HCAPLUS
 DN 142:5805

TI A novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.

IN Philip, Samuel; Somasundaram, Saravanan; Meyyappan, Thangaraj

PA Indfrag Limited, India

SO PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004100682	A1	20041125	WO 2003-IN192	20030519
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003241151	A1	20041203	AU 2003-241151	20030519
	US 2004259937	A1	20041223	US 2004-822867	20040413
PRAI	WO 2003-IN192	A	20030519		

AB The present invention relates to a novel composition of complex metal salt of garcinia acid comprising (-)-hydroxycitric acid (HCA), the lactone of HCA and citric acid, and a mixture of either a penta (5), tetra (4), triple (3) or double (2) metal ions, for use in dietary supplements, nutraceuticals, food products and beverages to promote **weight** loss. In the said composition the concentration of HCA is 40-75 %, the Lactone of HCA 0.1-30 %

and
citric acid 1-5 %, the rest being the metal ions selected from sodium, potassium, calcium, magnesium and/or zinc. The present invention also relates to the use of said composition in dietary supplements, nutraceuticals, food products and beverages, to promote **weight** loss and a process for preparing the said composition

IC ICM A23L002-78

CC 17-6 (Food and Feed Chemistry)

Section cross-reference(s): 18, 63

ST garcinia acid metal salt food additive antiobesity reducing diet

IT Antiobesity agents

Dietary supplements

Food additives

(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT Beverages

(additives; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT Food

(dietetic; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT Garcinia cambogia

(fruit rind water extract; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

- IT Bicarbonates
Carbonates, biological studies
Hydroxides (inorganic)
Oxides (inorganic), biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(of alkali- and alkaline earth metals; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT Phenols, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(polyphenols, nonpolymeric, antioxidants; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT Antioxidants
(polyphenols; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT Diet
(reducing; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT 7782-99-2, Sulfurous acid, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT 27750-10-3P, (-)-Hydroxycitric acid
RL: FFD (Food or feed use); PUR (Purification or recovery); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT 27750-13-6P, (-)-Hydroxycitric acid lactone
RL: FFD (Food or feed use); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT 7439-95-4DP, Magnesium, garcinia acid salts 7440-09-7DP, Potassium, garcinia acid salts 7440-23-5DP, Sodium, garcinia acid salts 7440-66-6DP, Zinc, garcinia acid salts 7440-70-2DP, Calcium, garcinia acid salts 27750-10-3DP, Garcinia acid, metal salts
RL: FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- IT 7439-95-4DP, Magnesium, garcinia acid salts 7440-09-7DP, Potassium, garcinia acid salts 7440-23-5DP, Sodium, garcinia acid salts 7440-70-2DP, Calcium, garcinia acid salts 27750-10-3DP, Garcinia acid, metal salts
RL: FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight loss**.)
- RN 7439-95-4 HCAPLUS

CN Magnesium (8CI, 9CI) (CA INDEX NAME)

Mg

RN 7440-09-7 HCAPLUS

CN Potassium (8CI, 9CI) (CA INDEX NAME)

K

RN 7440-23-5 HCAPLUS

CN Sodium (8CI, 9CI) (CA INDEX NAME)

Na

RN 7440-70-2 HCAPLUS

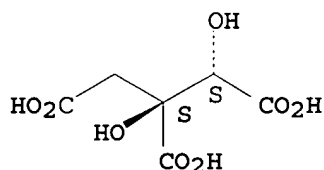
CN Calcium (8CI, 9CI) (CA INDEX NAME)

Ca

RN 27750-10-3 HCAPLUS

CN D-erythro-Pentartic acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:780373 HCAPLUS

DN 141:289062

TI Method and composition with **hydroxycitric acid** for
decreasing ghrelin levels

IN Bagchi, Debasis; Kothari, Shil

PA Interhealth Nutraceuticals, Inc., USA

SO U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004186181	A1	20040923	US 2004-805129	20040319
	WO 2004085462	A2	20041007	WO 2004-US8474	20040319
	WO 2004085462	A3	20051013		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
 TD, TG

PRAI US 2003-456592P P 20030321

AB A method and composition are disclosed for reducing **ghrelin** levels in a person or other mammal. The method involves administration of a composition incorporating (-)-**hydroxycitric** acid in an amount sufficient to **decrease** the **ghrelin** levels in a person or other mammal. The composition comprises (-)-**hydroxycitric** acid in an amount sufficient to **decrease** the **ghrelin** levels in the person or other mammal. The composition of the method and related composition can

also incorporate gymnemic acid, green tea extract, and oxygen coordinated niacin-bound chromium. The method and related composition are effective in reducing **ghrelin** levels in a person or mammal, which decreases feelings of hunger in a person or other mammal and allow for effective **weight** management. Administration of (-)-**hydroxycitric** acid-SX (HCA-SX) from **Garcinia** cambogia and HCA-SX + chromium + gymnemic acid reduced food intake by 11.4 % and 17.2 %, resp., compared to placebo.

IC ICM A61K031-19

INCL 514574000

CC 1-10 (Pharmacology)

Section cross-reference(s): 63

ST hydroxycitrate **decreasing ghrelin** hunger; chromium

hydroxycitrate gymnemate redn food intake

IT Gymnema

Gymnema sylvestre

(composition further comprising gymnemic acid from; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Gymnemic acids

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);

THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(composition further comprising; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Tea products

(green, extract of, composition further comprising; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Feeding

(**hydroxycitric** acid administration prior to; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Body weight

Human

Mammalia

(**hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT **Garcinia****Garcinia** cambogia

- (hydroxycitric acid from; hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT Body weight
(loss; hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT Food
(reduction of intake of; hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT Alkali metal salts
Alkaline earth salts
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with hydroxycitric acid; hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT 58-08-2, Caffeine, biological studies 989-51-5, Epigallocatechin gallate 3081-61-6, Theanine
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising green tea extract containing; hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT 59-67-6D, Niacin, Chromium complexes 7440-47-3, Chromium, biological studies 7440-47-3D, Chromium, complexes with niacin
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising; hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT 761458-24-6, HCA-SX 762247-04-1
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(food intake reduction with; hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT 304853-26-7, Ghrelin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hydroxycitric acid for decreasing ghrelin levels and decreasing feelings of hunger)
- IT 7439-93-2D, Lithium, salts with hydroxycitric acid
7439-95-4D, Magnesium, salts with hydroxycitric acid
7440-09-7D, Potassium, salts with hydroxycitric acid
7440-14-4D, Radium, salts with hydroxycitric acid
7440-23-5D, Sodium, salts with hydroxycitric acid
7440-24-6D, Strontium, salts with hydroxycitric acid
7440-39-3D, Barium, salts with hydroxycitric acid
7440-41-7D, Beryllium, salts with hydroxycitric acid
7440-46-2D, Cesium, salts with hydroxycitric acid
7440-70-2D, Calcium, salts with hydroxycitric acid
7440-73-5D, Francium, salts with hydroxycitric acid
27750-10-3, (-)-Hydroxycitric acid 27750-10-3D
, Hydroxycitric acid, group IA metal salts, group IIA metal salts 64913-19-5 132436-67-0 185196-38-7
213385-58-1 449158-84-3 760962-71-8
761426-32-8, Cesium hydroxycitrate 761426-33-9, Francium hydroxycitrate 761426-34-0, Beryllium hydroxycitrate
761426-35-1, Strontium hydroxycitrate 761426-36-2, Barium hydroxycitrate 761426-37-3, Radium hydroxycitrate

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydroxycitric acid for decreasing ghrelin
levels and decreasing feelings of hunger)

IT 304853-26-7, Ghrelin

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hydroxycitric acid for decreasing ghrelin
levels and decreasing feelings of hunger)

RN 304853-26-7 HCAPLUS

CN Ghrelin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 7439-93-2D, Lithium, salts with hydroxycitric acid

7439-95-4D, Magnesium, salts with hydroxycitric acid

7440-09-7D, Potassium, salts with hydroxycitric acid

7440-14-4D, Radium, salts with hydroxycitric acid

7440-23-5D, Sodium, salts with hydroxycitric acid

7440-24-6D, Strontium, salts with hydroxycitric acid

7440-39-3D, Barium, salts with hydroxycitric acid

7440-41-7D, Beryllium, salts with hydroxycitric acid

7440-46-2D, Cesium, salts with hydroxycitric acid

7440-70-2D, Calcium, salts with hydroxycitric acid

7440-73-5D, Francium, salts with hydroxycitric acid

27750-10-3, (-)-Hydroxycitric acid 27750-10-3D

, Hydroxycitric acid, group IA metal salts, group IIA metal

salts 64913-19-5 132436-67-0 185196-38-7

213385-58-1 449158-84-3 760962-71-8 76142

6-32-8, Cesium hydroxycitrate 761426-33-9, Francium

hydroxycitrate 761426-34-0, Beryllium hydroxycitrate

761426-35-1, Strontium hydroxycitrate 761426-36-2,

Barium hydroxycitrate 761426-37-3, Radium hydroxycitrate

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);

THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydroxycitric acid for decreasing ghrelin

levels and decreasing feelings of hunger)

RN 7439-93-2 HCAPLUS

CN Lithium (7CI, 8CI, 9CI) (CA INDEX NAME)

Li

RN 7439-95-4 HCAPLUS

CN Magnesium (8CI, 9CI) (CA INDEX NAME)

Mg

RN 7440-09-7 HCAPLUS

CN Potassium (8CI, 9CI) (CA INDEX NAME)

K

RN 7440-14-4 HCAPLUS

CN Radium (8CI, 9CI) (CA INDEX NAME)

Ra

RN 7440-23-5 HCAPLUS
CN Sodium (8CI, 9CI) (CA INDEX NAME)

Na

RN 7440-24-6 HCAPLUS
CN Strontium (8CI, 9CI) (CA INDEX NAME)

Sr

RN 7440-39-3 HCAPLUS
CN Barium (8CI, 9CI) (CA INDEX NAME)

Ba

RN 7440-41-7 HCAPLUS
CN Beryllium (7CI, 8CI, 9CI) (CA INDEX NAME)

Be

RN 7440-46-2 HCAPLUS
CN Cesium (8CI, 9CI) (CA INDEX NAME)

Cs

RN 7440-70-2 HCAPLUS
CN Calcium (8CI, 9CI) (CA INDEX NAME)

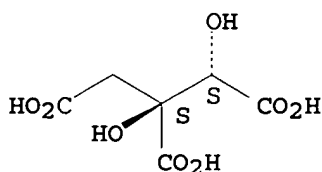
Ca

RN 7440-73-5 HCAPLUS
CN Francium (8CI, 9CI) (CA INDEX NAME)

Fr

RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

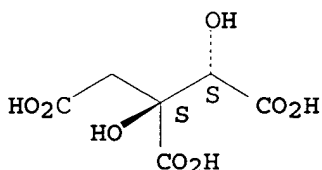
Absolute stereochemistry. Rotation (-).



RN 27750-10-3 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

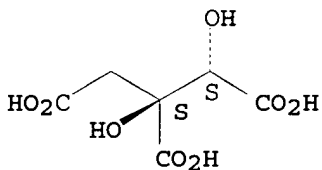
Absolute stereochemistry. Rotation (-).



RN 64913-19-5 HCAPLUS

CN Pentamic acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

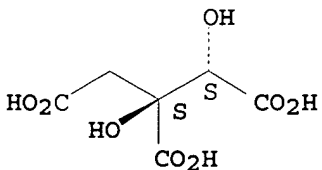


●x Na

RN 132436-67-0 HCAPLUS

CN D-threo-Pentamic acid, 3-C-carboxy-2-deoxy-, magnesium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

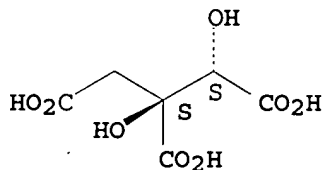


●x Mg

RN 185196-38-7 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

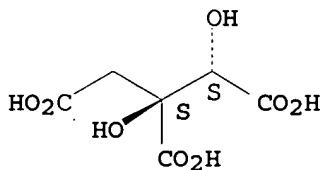
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

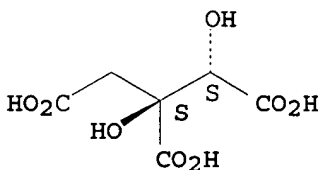
Absolute stereochemistry. Rotation (-).



●x Ca

RN 449158-84-3 HCAPLUS
CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

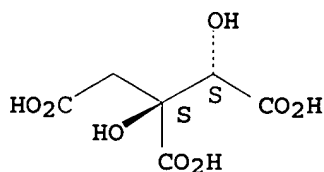


●x Ca

●x K

RN 760962-71-8 HCAPLUS
CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, lithium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

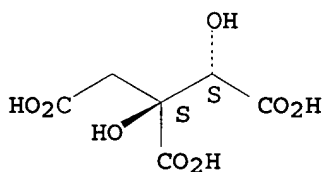


●x Li

RN 761426-32-8 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, monocation salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

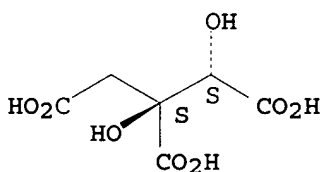


● Cs

RN 761426-33-9 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, monofranchium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

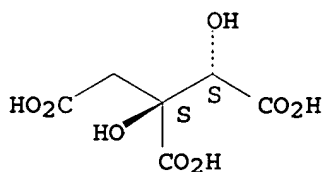


● Fr

RN 761426-34-0 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, beryllium salt (2:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

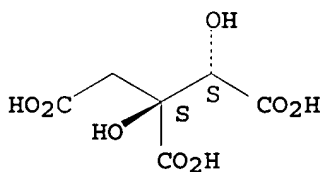


● 1/2 Be

RN 761426-35-1 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, strontium salt (2:1) (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

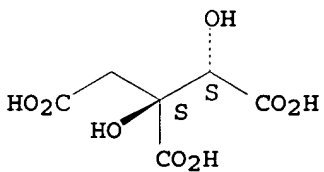


● 1/2 Sr

RN 761426-36-2 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, barium salt (2:1) (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

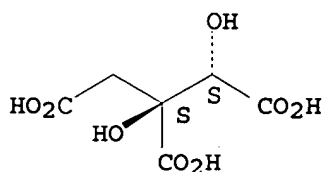


● 1/2 Ba

RN 761426-37-3 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, radium salt (2:1) (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



● 1/2 Ra

L26 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:439406 HCAPLUS

DN 142:68955

TI Effects of a natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and *Gymnema sylvestre* extract on **weight** loss

AU Preuss, H. G.; Bagchi, D.; Bagchi, M.; Rao, C. V. S.; Dey, D. K.; Satyanarayana, S.

CS Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC, USA

SO Diabetes, Obesity and Metabolism (2004), 6(3), 171-180

CODEN: DOMEF6; ISSN: 1462-8902

PB Blackwell Publishing Ltd.

DT Journal

LA English

AB Aim: The efficacy of optimal doses of highly bioavailable (-)-hydroxycitric acid (HCA-SX) alone and in combination with niacin-bound chromium (NBC) and a standardized *Gymnema sylvestre* extract (GSE) on **weight** loss in moderately obese subjects was evaluated by monitoring changes in body **weight**, body mass index (BMI), appetite, lipid profiles, serum leptin and excretion of urinary fat metabolites. HCA-SX has been shown to reduce appetite, inhibit fat synthesis and decrease body **weight** without stimulating the central nervous system. NBC has demonstrated its ability to maintain healthy insulin levels, while GSE has been shown to regulate **weight** loss and blood sugar levels. Methods: A randomized, double-blind, placebo-controlled human study was conducted in Elluru, India for 8 wk in 60 moderately obese subjects (ages 21-50, BMI > 26 kg/m²). Subjects were randomly divided into three groups. Group A was administered HCA-SX 4667 mg, group B was administered a combination of HCA-SX 4667 mg, NBC 4 mg and GSE 400 mg, while group C was given placebo daily in three equally divided doses 30-60 min before meals. All subjects received a 2000 kcal diet/day and participated in supervised walking. Results: At the end of 8 wk, body **weight** and BMI decreased by 5-6% in both groups A and B. Food intake, total cholesterol, low-d. lipoproteins, triglycerides and serum leptin levels were significantly reduced in both groups, while high-d. lipoprotein levels and excretion of urinary fat metabolites increased in both groups. A marginal or non-significant effect was observed in all parameters in group C. Conclusion: The present study shows that optimal doses of HCA-SX and, to a greater degree, the combination of HCA-SX, NBC and GSE can serve as an effective and safe **weight**-loss formula that can facilitate a reduction in excess body **weight** and BMI, while promoting healthy blood lipid levels.

CC 1-11 (Pharmacology)

ST hydroxycitric acid niacin bound chromium *Gymnema sylvestre* **wt** loss

- IT Combination chemotherapy
(HCA-SX alone or with NBC, GSE combination reduced body weight, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than alone in obese human)
- IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HCA-SX alone or with NBC, GSE combination reduced body weight, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than alone in obese human)
- IT Human
(HCA-SX alone or with NBC, GSE combination reduced body weight, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in human)
- IT Antiobesity agents
(HCA-SX alone or with NBC, GSE combination reduced body weight, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in obese human)
- IT Gymnema sylvestre
(effects of a natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and Gymnema sylvestre extract on weight loss)
- IT Glycerides, biological studies
High-density lipoproteins
Low-density lipoproteins
Very-low-density lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(food intake, total cholesterol, low-d. lipoproteins, triglycerides and serum leptin levels were significantly reduced in both groups, while high-d. lipoprotein levels and excretion of urinary fat metabolites increased in both groups)
- IT Body weight
(loss; effects of a natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and Gymnema sylvestre extract on weight loss)
- IT 9027-95-6, ATP citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ATP citrate lyase inhibitor HCA-SX alone or in combination with NBC and GSE was effective and safe showing reduced excess body wt. and BMI and promoted blood lipid levels in human)
- IT 169494-85-3, Leptin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HCA-SX alone or with NBC, GSE combination reduced body weight, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than alone in obese human)
- IT 156680-49-8, Chromemate 449158-84-3, Super CitriMax
812674-38-7, GYM 250
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HCA-SX alone or with NBC, GSE combination reduced body weight, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in human)
- IT 57-88-5, Cholesterol, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(food intake, total cholesterol, low-d. lipoproteins, triglycerides and

serum leptin levels were significantly reduced in both groups, while high-d. lipoprotein levels and excretion of urinary fat metabolites increased in both groups)

IT 449158-84-3, Super CitriMax

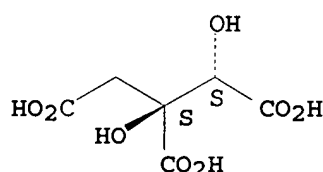
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(HCA-SX alone or with NBC, GSE combination reduced body weight, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in human)

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentartic acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:430456 HCAPLUS

DN 140:412347

TI Method for stable and controlled delivery of (-)-hydroxycitric acid salts

IN Clouatre, Dallas L.; Clouatre, Daniel E.; Dunn, James M.

PA USA

SO U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004101555	A1	20040527	US 2002-303117	20021123
PRAI	US 2002-303117		20021123		

AB Disclosed is a method for making the potassium, sodium and other hygroscopic salts of (-)-hydroxycitric acid and mixts. thereof workable by initial treatment with a desiccating agent, such as fumed silicon dioxide. These may be further rendered non-hygroscopic and non-reactive in acidic media via subsequent encasement in hydrophobic and acidophobic polymers. The calcium and magnesium salts of (-)-hydroxycitric acid likewise can be rendered nonreactive in acidic media. The resulting products are suitable for tableting, encapsulation and use in other dry media for weight loss, appetite suppression, improvements in fat metabolism and postprandial

lipemia and other pharmaceutical purposes. Further, the products of this invention can be made nonreactive as components of acidic liquid drink mixes and snack bars and can be used in the production of controlled release administration formats.

IC ICM A61K031-724

ICS A61K009-20; A61K009-16; A61K009-50

INCL 424465000; 514058000; 424439000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 17

ST hydroxycitrate desiccant polymer stabilizer fat metab improvement; silica polymer hydroxycitrate stability oral delivery health food

IT Lipids, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood, lowering by; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT Drug delivery systems

(capsules; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT Body weight

(loss; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT Adipose tissue

(metabolism enhancement by; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT Appetite depressants

Beverages

(oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT Hyperlipidemia

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(postprandial, inhibition by; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT Drying agents

(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)

IT Polyesters, biological studies

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)

IT Food

(snack, bars; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT Drug delivery systems

(tablets; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)

IT 9012-83-3, Citrate lyase

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cytoplasmic, inhibition by; processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)

IT 79-10-7D, Acrylic acid, derivs., polymers 7631-86-9, Silicon dioxide, biological studies 9004-38-0, Cellulose acetate phthalate 9004-57-3, Ethyl cellulose 12619-70-4, Cyclodextrin 12619-70-4D, Cyclodextrin, hydroxypropyl ethers 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 52907-01-4, Cellulose acetate trimellitate 53237-50-6 64913-19-5 98723-86-5, Hydroxymethyl cellulose phthalate 132436-67-0 185196-38-7 213385-58-1

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study)

; USES (Uses)

(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)

IT 64913-19-5 132436-67-0 185196-38-7
213385-58-1

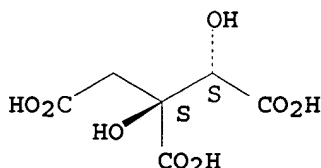
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)

RN 64913-19-5 HCAPLUS

CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

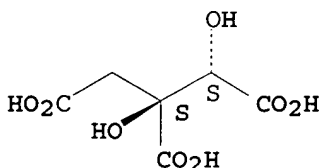


●x Na

RN 132436-67-0 HCAPLUS

CN D-threo-Pentaric acid, 3-C-carboxy-2-deoxy-, magnesium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

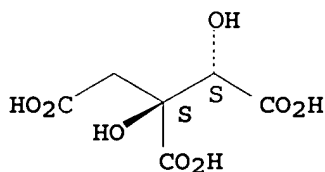


●x Mg

RN 185196-38-7 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

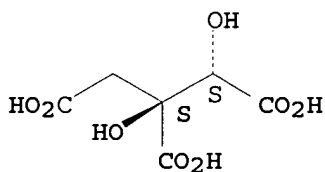


●x K

RN 213385-58-1 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

L26 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:350574 HCAPLUS

DN 141:17433

TI Physico-chemical properties of a novel (-)-hydroxycitric acid extract and its effect on body **weight**, selected organ **weights**, hepatic lipid peroxidation and DNA fragmentation, hematology and clinical chemistry, and histopathological changes over a period of 90 days

AU Shara, Michael; Ohia, Sunny E.; Schmidt, Robert E.; Yasmin, Taharat; Zardetta-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; Bagchi, Debasis; Stohs, Sidney J.

CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, USA

SO Molecular and Cellular Biochemistry (2004), 260(1&2), 171-186

CODEN: MCBIB8; ISSN: 0300-8177

PB Kluwer Academic Publishers

DT Journal

LA English

AB Garcinia cambogia-derived (-)-hydroxycitric acid (HCA) is a popular and natural supplement for **weight** management. HCA is a competitive inhibitor of the enzyme ATP citrate lyase, which catalyzes the conversion of citrate and CoA to oxaloacetate and acetyl CoA (acetyl CoA) in the cytosol. Acetyl CoA is used in the synthesis of fatty acids, cholesterol and triglycerides, and in the synthesis of acetylcholine in the central nervous system. Studies have demonstrated the efficacy of a novel 60% calcium-potassium salt of HCA derived from Garcinia cambogia (HCA-SX, Super CitriMax) in **weight** management. Results have shown that HCA-SX promotes fat oxidation, enhances serotonin release and availability in the brain cortex, normalizes lipid profiles, and lowers serum leptin

levels in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity, as well as Ames bacterial reverse mutation studies and mouse lymphoma tests have demonstrated the safety of HCA-SX. However, no detailed long-term safety of HCA-SX or any other HCA extract has been previously assessed. We evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body wt., selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical over a period of 90 days. Furthermore, a 90-day histopathol. evaluation was conducted. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX of feed intake and were sacrificed on 30, 60 or 90 days of treatment. The body weight and selected organ wts. were assessed and correlated as a % of body weight and brain wt. at 90 days of treatment. A significant reduction in body weight was observed in treated rats as compared to control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats, while no such difference in hepatic DNA fragmentation was observed as compared to the control animals. Furthermore, selected organ wts. individually and as a % of body weight and brain weight at 90 days of treatment exhibited no significant difference between the groups. No difference was observed in hematol. and clin. chemical or the histopathol. evaluation. Taken together, these results show that 90 day treatment of HCA-SX results in a reduction in body wt., and does not cause any changes in major organs or in hematol., clin. chemical, and histopathol.

CC 1-11 (Pharmacology)

ST hydroxycitrate body wt liver lipid peroxidn DNA fragmentation
hematol; Super CitriMax antiobesity obese liver lipid peroxidn organ
wt

IT Antiobesity agents

Body weight

Garcinia cambogia

Lipid peroxidation

Obesity

(effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT DNA fragmentation

Lipid peroxidation

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT Natural products, pharmaceutical

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT Adrenal gland

Brain

Heart

Kidney

Liver

Ovary

Prostate gland

Seminal vesicle

Spleen

Thymus gland

Uterus

(weight; effect (-)-hydroxycitric acid extract on body wt

.., selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT 449158-84-3, Super CitriMax

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

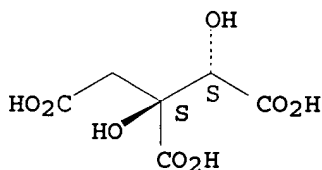
IT 449158-84-3, Super CitriMax

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:871815 HCAPLUS

DN 140:264420

TI Dose- and time-dependent effects of a novel (-)-hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidation, DNA fragmentation and histopathological data over a period of 90 days

AU Shara, Michael; Ohia, Sunney E.; Yasmin, Taharat; Zardetto-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; Bagchi, Debasis; Stohs, Sidney J.

CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, 68178, USA

SO Molecular and Cellular Biochemistry (2003), 254(1&2), 339-346

CODEN: MCBIB8; ISSN: 0300-8177

PB Kluwer Academic Publishers

DT Journal

LA English

AB (-)-Hydroxycitric acid (HCA), a natural extract from the dried fruit rind of Garcinia cambogia (family Guttiferae), is a popular supplement for weight management. The dried fruit rind has been used for centuries

as a condiment in Southeastern Asia to make food more filling and satisfying. A significant number of studies highlight the efficacy of Super CitriMax (HCA-SX, a novel 60% calcium-potassium salt of HCA derived from *Garcinia cambogia*) in **weight** management. These studies also demonstrate that HCA-SX promotes fat oxidation, inhibits ATP-citrate lyase (a building block for fat synthesis), and lowers the level of leptin in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity studies have demonstrated the safety of HCA-SX. However, no long-term safety of HCA-SX or any other (-)-hydroxycitric acid extract has been previously assessed. In this study, we have evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation, liver and testis **weight**, expressed as such and as a % of body **weight** and brain **weight**, and histopathol. changes over a period of 90 days. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX as feed intake and the animals were sacrificed on 30, 60 or 90 days of treatment. The feed and water intake were assessed and correlated with the reduction in body **weight**. HCA-SX supplementation demonstrated a reduction in body **weight** in both male and female rats over a period of 90 days as compared to the corresponding control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats as compared to the corresponding control animals. However, no such difference in hepatic DNA fragmentation and testicular lipid peroxidn. and DNA fragmentation was observed. Furthermore, liver and testis **weight**, expressed as such and as a percentage of body **weight** and brain **weight**, at 30, 60 and 90 days of treatment, exhibited no significant difference between the four groups. Taken together, these results indicate that treatment of HCA-SX over a period of 90 days results in a reduction in body **weight**, but did not cause any changes in hepatic and testicular lipid peroxidn., DNA fragmentation, or histopathol. changes.

CC 1-12 (Pharmacology)

Section cross-reference(s): 11

ST hydroxycitrate **wt** management liver testis lipid peroxidn DNA fragmentation

IT Behavior

(drinking; effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Apoptosis

Body **weight**

Feeding

Lipid peroxidation

Liver

Testis

(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT DNA fragmentation

Lipid peroxidation

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Natural products, pharmaceutical

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

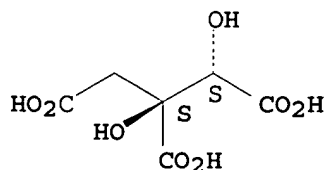
IT 27750-10-3, (-)-Hydroxycitric acid 449158-84-3, Super CitriMax

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT 449158-84-3, Super CitriMax
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)
 RN 449158-84-3 HCAPLUS
 CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:688478 HCAPLUS
 DN 137:222054
 TI Salts of (-)-hydroxycitric acid for pharmaceutical preparations for stable and controlled delivery
 IN Clouatre, Dallas L.; Dunn, James M.
 PA USA
 SO U.S., 6 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6447807	B1	20020910	US 2000-661665	20000914
PRAI	US 1999-153920P	P	19990914		
	US 1999-153923P	P	19990914		
	US 1999-153924P	P	19990914		

AB A method for making the potassium and sodium salts of (-)-hydroxycitric acid and mixts. thereof workable, non-hygroscopic and non-reactive in acidic media by encasement in hydrophobic and acidophobic polymers are described. The calcium and magnesium salts of (-)-hydroxycitric acid likewise can be rendered non-reactive in acidic media. The resulting products are suitable for tableting, encapsulation and use in other dry media for weight loss, appetite suppression, improvements in fat metabolism and postprandial lipemia and other pharmaceutical purposes. Further, the products of this invention can be made non-reactive as

components of acidic liquid drink mixes and snack bars and can be used in the production of controlled release administration formats. For example, a powder containing potassium (-)-hydroxycitrate powder (35% KHCA) 1.00 g, cellulose acetate phthalate 0.50 g, calcium sulfate 0.30 g, talc 0.03 g, and magnesium stearate 0.02 g can be used to compress tablets weighing 1000-1500 mg which would contain 540-818 mg of the prepared KHCA powder. Considering that the starting material is only 35% active, the amount of KHCA per tablet would be 189-287 mg. These tablets will not dissolve in the acid media of the stomach and will start a gradually release of the drug product once they arrive in the more pH neutral media of the 2nd part of the small intestine. Addnl. these tablets can be over coated with a clear film to protect them from any random damage, but this will not affect their dissoln. rate.

IC ICM A61K009-16
ICS A61K009-50; A61K047-00; A61K009-22; A61K009-00
INCL 424494000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 17
ST hydroxycitrate polymer coating encapsulation granule stability; controlled release delivery system hydroxycitrate polymer
IT Confectionery
(bars; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drug delivery systems
(capsules; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drug delivery systems
(controlled-release; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drying
(fluidized-bed; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactic acid-based; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Antiobesity agents
Appetite depressants
Beverages
Freeze drying
Granulation
Human
Hypolipemic agents
(polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Acrylic polymers, biological studies
Polyesters, biological studies
Zeins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Hyperlipidemia
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(postprandial, reduction of; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drying
(spray; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drug delivery systems
(tablets; polymer coating or encapsulation of (-)-hydroxycitrate salts

for stable and controlled delivery systems)

IT 9012-83-3, Citrate lyase
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (inhibition of cytoplasmic; polymer coating or encapsulation of
 (-)-hydroxycitrate salts for stable and controlled delivery systems)

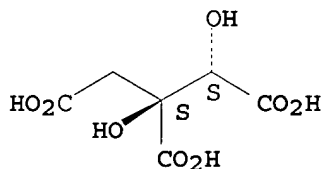
IT 27750-10-3D, (-)-Hydroxycitric acid, salts 64913-19-5
 185196-38-7
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (polymer coating or encapsulation of (-)-hydroxycitrate salts for
 stable and controlled delivery systems)

IT 57-55-6D, 1,2-Propanediol, ethers with cyclodextrin 69-65-8, D-Mannitol
 9004-38-0, Cellulose acetate phthalate 9004-57-3, Ethyl cellulose
 9050-31-1 9062-10-6 12619-70-4D, Cyclodextrin, ethers with propanediol
 26009-03-0, Poly(glycolic acid) 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-
 ethanediyl)] 26100-51-6, Poly(lactic acid) 26124-68-5, Poly(glycolic
 acid) 53237-50-6
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (polymer coating or encapsulation of (-)-hydroxycitrate salts for
 stable and controlled delivery systems)

IT 64913-19-5 185196-38-7
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (polymer coating or encapsulation of (-)-hydroxycitrate salts for
 stable and controlled delivery systems)

RN 64913-19-5 HCAPLUS
 CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

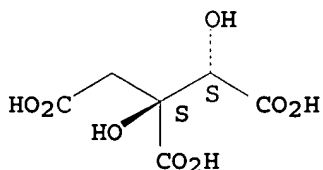
Absolute stereochemistry. Rotation (-).



●x Na

RN 185196-38-7 HCAPLUS
 CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA
 INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x K

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:190874 HCAPLUS
DN 132:227426
TI Hydroxycitric acid compositions for lipogenesis inhibitors and appetite suppressants
IN Gokaraju, Ganga Raju
PA Interhealth Nutraceuticals, Inc., USA
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000015051	A1	20000323	WO 1999-US21099	19990914
	W: CA, IN, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1998-151806	A	19980914		
AB	Partial calcium salts of hydroxycitric acid are prepared as lipogenesis inhibitors and appetite suppressants; the preparation is potassium-free and obtained from an extract of Garcinia fruit. The composition is highly water soluble, has minimal hygroscopicity, and has favorable flavor and aesthetic properties. Thus, hydroxycitric acid is obtained from Garcinia rind by alc./acetone extraction, and after clean up and concentration calcium hydroxycitrate is formed by adding calcium hydroxide; conversion to the partial calcium salt of hydroxycitric acid is achieved by using sulfuric acid.				
IC	ICM A23L001-30				
	ICS A61K031-194; A61K031-365; A23L001-03				
CC	63-4 (Pharmaceuticals)				
	Section cross-reference(s): 1, 17				
ST	Garcinia hydroxycitrate calcium lipogenesis inhibitor appetite suppressant; citrate hydroxy lipogenesis inhibitor appetite suppressant				
IT	Antiobesity agents				
	Appetite depressants				
	Flavor				
	Food additives				
	Garcinia				
	(hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)				
IT	Lipids, biological studies				
	RL: BSU (Biological study, unclassified); BIOL (Biological study) (lipogenesis inhibitors; hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)				
IT	Body weight				
	(loss; hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)				
IT	27750-10-3P, Hydroxycitric acid 213385-58-1P				
	RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)				
IT	7440-09-7, Potassium, biological studies 7440-23-5, Sodium, biological				

studies 7440-70-2, Calcium, biological studies
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (hydroxycitric acid compns. for lipogenesis inhibitors and appetite
 suppressants)

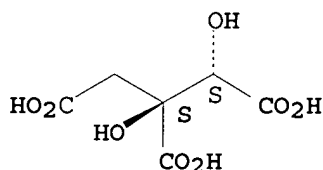
IT 213385-58-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); FFD (Food or feed use); PUR (Purification or
 recovery); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (hydroxycitric acid compns. for lipogenesis inhibitors and appetite
 suppressants)

RN 213385-58-1 HCAPLUS

CN D-erythro-Pentamic acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA
 INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:81564 HCAPLUS

DN 130:144169

TI Hydroxycitric acid compositions, pharmaceutical and dietary supplements
 and food products made therefrom, and methods for their use in reducing
 body weight

IN Raju, G. Ganga

PA Interhealth Nutraceuticals Incorporated, USA

SO PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DT Patent

LA English

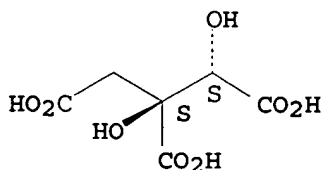
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9903464	A1	19990128	WO 1998-US14481	19980713
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1011660	A1	20000628	EP 1998-935633	19980713
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001527022	T2	20011225	JP 2000-502764	19980713
	US 2005282894	A1	20051222	US 2005-209429	20050822
	US 2005282904	A1	20051222	US 2005-209580	20050822
PRAI	US 1997-892414	A	19970714		
	WO 1998-US14481	W	19980713		

US 2002-463024 A1 20020215

- AB Hydroxycitric acid (I) compns. which comprise approx. 14 to 26 % by weight of calcium, and approx. 24 to 40 % by weight of potassium or approx. 14 to 24 % by weight of sodium, or a mixture thereof, each calculated as a percentage of the total hydroxycitric acid content of the composition, together with dietary supplements and food products containing such compns. and methods for utilizing such compns., dietary supplements and food products to reduce body weight in mammals are disclosed. Exts. from Garcinia fruits reacted with calcium hydroxide to obtain calcium hydroxycitrate which was reacted with phosphoric acid to convert the calcium hydroxycitrate to I (yield 91.6%). I was reacted with calcium hydroxide to obtain calcium salt of I.
- IC ICM A61K031-34
ICS A61K031-19
- CC 63-4 (Pharmaceuticals)
Section cross-reference(s): 1
- ST pharmaceutical food hydroxycitric acid body wt; diet supplement
hydroxycitric acid body wt
- IT Garcinia
(fruits exts.; pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body weight)
- IT Antiobesity agents
Body weight
Food
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body weight)
- IT Diet
(supplements; pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body weight)
- IT 27750-10-3, Hydroxycitric acid
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body weight)
- IT 1305-62-0, Calcium hydroxide, reactions 7664-38-2, Phosphoric acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body weight)
- IT 213385-58-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body weight)
- IT 213385-58-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body weight)
- RN 213385-58-1 HCAPLUS
- CN D-erythro-Pentarcic acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FILE HCAPLU

FILE 'HCAPLU' ENTERED AT 17:00:38 ON 31 AUG 2006

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FILE COVERS 1907 - 31 Aug 2006 VOL 145 ISS 10

FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L31

L2	32	SEA FILE=REGISTRY ABB=ON (27750-10-3/BI OR 7440-47-3/BI OR 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26-7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36-2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR 989-51-5/BI)
L3	12	SEA FILE=REGISTRY ABB=ON L2 AND SALT
L4	1	SEA FILE=REGISTRY ABB=ON L2 AND GHRELIN
L5	1	SEA FILE=REGISTRY ABB=ON 27750-10-3
L9	1957	SEA FILE=HCAPLU ABB=ON L4 OR GHRELIN
L16	352	SEA FILE=HCAPLU ABB=ON L9(3A) (DECREAS? OR LOW?)
L17	237	SEA FILE=HCAPLU ABB=ON L5
L27	169	SEA FILE=HCAPLU ABB=ON "BAGCHI DEBASIS"/AU

L28 8 SEA FILE=HCAPLUS ABB=ON KOTHARI SHIL?/AU
 L29 4 SEA FILE=HCAPLUS ABB=ON L27 AND L28
 L30 15 SEA FILE=HCAPLUS ABB=ON (L27 OR L28) AND (L9 OR L16 OR L17 OR
 L3)
 L31 17 SEA FILE=HCAPLUS ABB=ON L29 OR L30

=> FILE MEDLINE

FILE 'MEDLINE' ENTERED AT 17:00:51 ON 31 AUG 2006

FILE LAST UPDATED: 30 Aug 2006 (20060830/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
 See also:

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L38

L2 32 SEA FILE=REGISTRY ABB=ON (27750-10-3/BI OR 7440-47-3/BI OR
 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26
 -7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR
 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR
 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI
 OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI
 OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR
 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36
 -2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR
 989-51-5/BI)
 L4 1 SEA FILE=REGISTRY ABB=ON L2 AND GHRELIN
 L5 1 SEA FILE=REGISTRY ABB=ON 27750-10-3
 L32 1733 SEA FILE=MEDLINE ABB=ON L4 OR GHRELIN
 L33 116 SEA FILE=MEDLINE ABB=ON L5 OR HYDROXYCITRIC?
 L35 455 SEA FILE=MEDLINE ABB=ON BAGCHI D?/AU OR KOTHARI S?/AU
 L36 50 SEA FILE=MEDLINE ABB=ON L35 AND (L32 OR L33 OR WEIGHT? OR
 GARCINIA?)
 L37 15583 SEA FILE=MEDLINE ABB=ON CITRATES+NT/CT
 L38 11 SEA FILE=MEDLINE ABB=ON L36 AND L37

=> DUP REM L31 L38

FILE 'HCAPLUS' ENTERED AT 17:01:07 ON 31 AUG 2006

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FILE 'MEDLINE' ENTERED AT 17:01:07 ON 31 AUG 2006

PROCESSING COMPLETED FOR L31

PROCESSING COMPLETED FOR L38

L42 21 DUP REM L31 L38 (7 DUPLICATES REMOVED)

=> D L42 1-21 ALL

L42 ANSWER 1 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:469866 HCAPLUS
DN 144:460642
ED Entered STN: 19 May 2006
TI DNA microarray technology in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid. [Erratum to document cited in CA144:381745]
AU Bagchi, Manashi; Zafra-Stone, Shirley; Sen, Chandan K.; Roy, Sashwati; **Bagchi, Debasis**
CS InterHealth Research Center, Benicia, CA, USA
SO Toxicology Mechanisms and Methods (2006), 16(4), 241
CODEN: TMMOCP; ISSN: 1537-6524
PB Taylor & Francis, Inc.
DT Journal
LA English
CC 1-10 (Pharmacology)
Section cross-reference(s): 17
AB This article did not print with color figures. A correct version of this article is available in the official online version of the issue.
ST erratum DNA microarray calcium potassium hydroxycitrate antiobesity serotonin receptor
IT Adipose tissue
Antiobesity agents
Appetite
DNA microarray technology
Drug screening
Human
Natural products, pharmaceutical
Obesity
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid (Erratum))
IT 5-HT receptors
Fats and Glyceridic oils, biological studies
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid (Erratum))
IT 27750-10-3D, (-)-Hydroxycitric acid, calcium-potassium salt
RL: DMA (Drug mechanism of action); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid (Erratum))

L42 ANSWER 2 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:264436 HCAPLUS
DN 144:381745
ED Entered STN: 22 Mar 2006
TI DNA microarray technology in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid
AU Bagchi, Manashi; Zafra-Stone, Shirley; Sen, Chandan K.; Roy, Sashwati; **Bagchi, Debasis**
CS InterHealth Research Center, Benicia, CA, USA
SO Toxicology Mechanisms and Methods (2006), 16(2-3), 129-135
CODEN: TMMOCP; ISSN: 1537-6524

PB Taylor & Francis, Inc.

DT Journal

LA English

CC 1-10 (Pharmacology)

Section cross-reference(s): 17

AB Quality and quantity of diet and nutrients are key factors of human health and disease prevention. Mol. diagnostics and cellular signaling play a fundamental role in the usefulness of novel nutraceuticals and functional foods. Increasing knowledge of the genes and mols. involved in the development of obesity is creating new methods of obesity regulation. Traditional herbal medicines may have some potential in weight management. Botanical dietary supplements often contain complex mixts. of phytochems. that have additive or synergistic interactions. Evidence from numerous human and animal dietary studies has demonstrated the potential therapeutic effects of traditional herbal medicines in controlling obesity. We analyzed the effects of low-dose oral administration of calcium-potassium salt of (-)-hydroxycitric acid (HCA-SX) on the body weight and abdominal fat transcriptome in rats. HCA-SX restricted body weight gain in rats and lowered abdominal fat leptin expression. High-d. microarray anal. of 9960 genes and ESTs present in the fat tissue identified a small set of specific genes sensitive to dietary HCA-SX. Mitochondrial/nuclear proteins necessary for fundamental support of the tissue were not affected by HCA-SX, further demonstrating its safety. Functional characterization of HCA-SX sensitive genes revealed that up-regulation of genes encoding serotonin receptors represents a distinct effect of HCA-SX on appetite suppression.

ST DNA microarray calcium potassium hydroxycitrate antiobesity serotonin receptor

IT Adipose tissue

Antiobesity agents

Appetite

DNA microarray technology

Drug screening

Human

Natural products, pharmaceutical

Obesity

(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid)

IT 5-HT receptors

Fats and Glyceridic oils, biological studies

Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid)

IT 27750-10-3D, (-)-Hydroxycitric acid, calcium-potassium salt

RL: DMA (Drug mechanism of action); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L42 ANSWER 3 OF 21 MEDLINE on STN
 AN 2005483601 MEDLINE
 DN PubMed ID: 15993998
 TI **Garcinia cambogia** toxicity is misleading.
 AU Burdock George; Bagchi Manashi; **Bagchi Debasis**
 SO Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association, (2005 Nov) Vol. 43, No. 11, pp. 1683-4; author reply 1685-6.
 Journal code: 8207483. ISSN: 0278-6915.
 CM Comment on: Food Chem Toxicol. 2005 Mar;43(3):411-9. PubMed ID: 15680676
 CY England: United Kingdom
 DT Commentary
 Letter
 LA English
 FS Priority Journals
 EM 200511
 ED Entered STN: 13 Sep 2005
 Last Updated on STN: 9 Nov 2005
 Entered Medline: 8 Nov 2005
 CT Check Tags: Male
 Animals
 Citrates: TO, toxicity
 Diet
 *Garcinia: TO, toxicity
 Obesity: DT, drug therapy

Obesity: GE, genetics
 Phytotherapy
 Plant Extracts: TU, therapeutic use
 Plant Extracts: TO, toxicity
 Rats
 Rats, Zucker
 Testicular Diseases: CI, chemically induced
 Testicular Diseases: PA, pathology

RN 6205-14-7 (hydroxycitric acid)
 CN 0 (Citrates); 0 (Plant Extracts)

L42 ANSWER 4 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:1050885 HCAPLUS
 DN 143:299137
 ED Entered STN: 30 Sep 2005
 TI Methods for increasing neurotransmitter levels using hydroxycitric acid
 IN Bagchi, Debasis; Ohia, Sunny E.; Preuss, Harry G.
 PA Interhealth Nutraceuticals, Inc., USA
 SO U.S. Pat. Appl. Publ., 4 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM A61K031-19
 INCL 514574000
 CC 1-11 (Pharmacology)
 Section cross-reference(s): 2, 4, 11, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005215644	A1	20050929	US 2005-81176	20050316
	WO 2005089441	A2	20050929	WO 2005-US8942	20050318
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	US 2004-554653P	P	20040319		
	US 2005-81176	A	20050316		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005215644	ICM	A61K031-19
	INCL	514574000
	IPCI	A61K0031-19 [ICM,7]; A61K0031-185 [ICM,7,C*]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]
	NCL	514/574.000
WO 2005089441	IPCI	A61K [ICM,7]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]

AB Composition and methods for increasing neurotransmitter levels of dopamine and serotonin in a subject through administration of (-)-hydroxycitric acid.
 ST hydroxycitric acid pharmaceutical ext aging drug addiction mental disease; brain neurotransmitter hydroxycitric acid dopamine agonist alcoholism tobacco smoking
 IT Mental and behavioral disorders

- (attention deficit disorder; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Mental and behavioral disorders
 - (attention deficit hyperactivity disorder; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Tea products
 - (beverages, green; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Mental and behavioral disorders
 - (bipolar disorder; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Brain
 - (cerebral cortex; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Carbohydrates, biological studies
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (cravings for; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Mental and behavioral disorders
 - (depression; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Aging, animal
 - (dysfunction due to; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Energy
 - (dysfunctional regulation; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Alcoholism
 - Alzheimer's disease
 - Anti-Alzheimer's agents
 - Antidepressants
 - Antiparkinsonian agents
 - Antipsychotics
 - Brain
 - Cognition enhancers
 - Cognitive disorders
 - Dopamine agonists
 - Drug dependence
 - Panax
 - Parkinson's disease
 - Piper methysticum
 - Psychotropics
 - Schizophrenia
 - Tobacco smoke
 - (methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Neurotransmitters
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Natural products, pharmaceutical
 - RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
 - (methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Mental and behavioral disorders
 - (obsession-compulsion; methods for increasing neurotransmitter levels using hydroxycitric acid)
- IT Drug delivery systems
 - (oral; methods for increasing neurotransmitter levels using

hydroxycitric acid)

IT 50-36-2, Cocaine 54-11-5, Nicotine 64-17-5, Alcohol, biological studies 300-62-9, Amphetamine
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (cravings for; methods for increasing neurotransmitter levels using hydroxycitric acid)

IT 50-67-9, Serotonin, biological studies 51-61-6, Dopamine, biological studies 54-16-0, 5-Hydroxyindoleacetic acid, biological studies 102-32-9, 3,4-Dihydroxyphenylacetic acid 306-08-1, Homovanillic acid
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (methods for increasing neurotransmitter levels using hydroxycitric acid)

IT 27750-10-3, (-)-Hydroxycitric acid
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (methods for increasing neurotransmitter levels using hydroxycitric acid)

IT 54910-89-3, Fluoxetine
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (methods for increasing neurotransmitter levels using hydroxycitric acid)

IT 1399-64-0, Gymnemic acid 7440-47-3, Chromium, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (methods for increasing neurotransmitter levels using hydroxycitric acid)

L42 ANSWER 5 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:34450 HCAPLUS
 DN 142:120544
 ED Entered STN: 14 Jan 2005
 TI Compositions incorporating high-caffeine green tea extract and related methods for promoting healthy body weight
 IN Bagchi, Debasis; Kothari, Shil C.
 PA USA
 SO U.S. Pat. Appl. Publ., 5 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM A61K035-78
 ICS A61K031-522; A61K031-7048; A61K031-353
 INCL 424729000; 514027000; 514263310; 514456000
 CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 18, 62

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005008712	A1	20050113	US 2003-615887	20030708
	WO 2005014020	A1	20050217	WO 2003-US24155	20030730
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003258003	A1	20050225	AU 2003-258003	20030730

PRAI US 2003-615887 A 20030708
 WO 2003-US24155 W 20030730

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005008712	ICM	A61K035-78
	ICS	A61K031-522; A61K031-7048; A61K031-353
	INCL	424729000; 514027000; 514263310; 514456000
	IPCI	A61K0035-78 [ICM,7]; A61K0031-522 [ICS,7]; A61K0031-519 [ICS,7,C*]; A61K0031-7048 [ICS,7]; A61K0031-7042 [ICS,7,C*]; A61K0031-353 [ICS,7]; A61K0031-352 [ICS,7,C*]
	IPCR	A61K0031-352 [I,C*]; A61K0031-353 [I,A]; A61K0031-519 [I,C*]; A61K0031-522 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]
	NCL	424/729.000; 514/027.000; 514/263.310; 514/456.000
	ECLA	A61K031/353; A61K031/522; A61K031/7048; A61K035/78
WO 2005014020	IPCI	A61K0035-78 [ICM,7]; A61P0003-04 [ICS,7]; A61P0003-00 [ICS,7,C*]
	IPCR	A61K0031-352 [I,C*]; A61K0031-353 [I,A]; A61K0031-519 [I,C*]; A61K0031-522 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]
	ECLA	A61K031/353; A61K031/522; A61K031/7048; A61K035/78
AU 2003258003	IPCI	A61K0035-78 [ICM,7]; A61P0003-04 [ICS,7]; A61P0003-00 [ICS,7,C*]
AB		Methods for promoting healthy body weight, increasing energy level and improving a variety of related physiol. factors include administering to those persons or other mammals effective amts. of a composition incorporating (-)-Epigallocatechin 3-gallate (EGCG) and caffeine derived from green tea, preferably in equal or nearly equal amts. The EGCG and caffeine in these amts. work synergistically to further promote healthy body weight, increase energy level and improve these physiol. factors.
ST		green tea ext body wt
IT		Tea products (beverages, green; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT		Drug delivery systems (capsules; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT		Beverages Body weight Camellia sinensis Dentifrices Food Human (compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT		Tea products (green; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT		Drug delivery systems (lozenges; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT		Drug delivery systems (oral, sprays; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT		Drug delivery systems (powders; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT		Drug delivery systems

(sprays, oral; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Drug delivery systems
(tablets; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Drug delivery systems
(transdermal; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT 58-08-2, Caffeine, biological studies 989-51-5, (-)-Epigallocatechin 3-gallate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

L42 ANSWER 6 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:993589 HCAPLUS

DN 143:320371

ED Entered STN: 13 Sep 2005

TI Garcinia cambogia toxicity is misleading

AU Burdock, George; Bagchi, Manashi; **Bagchi, Debasis**

CS Madhusudan Soni Burdock Group, Vero Beach, FL, 32960, USA

SO Food and Chemical Toxicology (2005), 43(11), 1683-1684

CODEN: FCTOD7; ISSN: 0278-6915

PB Elsevier Ltd.

DT Journal

LA English

CC 4-3 (Toxicology)

AB A recent article by Saito et al. (2005) reports that high doses of Garcinia cambogia extract are effective in suppressing fat accumulation in developing male Zucker obese rats, but highly toxic to the testis. A polemic in response to Saito et al. (ibid., 2005, 43, 411-419) raises several questions, such as: (1) the form of (-)-hydroxycitric acid (HCA) and toxicity; (2) exptl. study design and results; (3) Zucker rat model and testicular toxicity; and (4) dietary ingredients and testicular toxicity.

ST Garcinia hydroxycitrate testis toxicity polemic

IT Diet

Garcinia cambogia

Testis

Toxicity

(Garcinia cambogia toxicity is misleading)

IT 27750-10-3, (-)-Hydroxycitric acid

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)

(Garcinia cambogia toxicity is misleading)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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MEDLINE

(2) Saito, M; Food and Chemical Toxicology 2005, V43, P411 HCAPLUS

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L42 ANSWER 7 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

AN 2005:1165924 HCAPLUS

DN 143:459196

ED Entered STN: 01 Nov 2005

TI Bioefficacy of a novel calcium-potassium salt of (-)-hydroxycitric acid

AU Downs, Bernard W.; Bagchi, Manashi; Subbaraju, Gottumukkala V.; Shara, Michael A.; Preuss, Harry G.; Bagchi, Debasis
 CS InterHealth Research Center, Benicia, CA, USA
 SO Mutation Research (2005), 579(1-2), 149-162
 CODEN: MUREAV; ISSN: 0027-5107
 PB Elsevier B.V.
 DT Journal; General Review
 LA English
 CC 18-0 (Animal Nutrition)
 Section cross-reference(s): 14
 AB A review. Obesity is associated with cardiovascular diseases, diabetes mellitus, and certain forms of cancer. Popular strategies for body weight loss often fail to address some key factors, such as body fat mass, muscle d., bone d., water mass, their inter-relationships and impact on energy production, body composition, and overall health and well-being. The (-)-hydroxycitric acid (HCA), present in exts. from dried peel of Garcinia cambogia fruit, has been reported to promote body fat loss in humans without stimulating the central nervous system. The effectiveness of G. cambogia extract is typically attributed solely to HCA, but other components may contribute to its therapeutic effectiveness. HCA is typically present in dietary body weight loss supplements as Ca salt with poor solubility (<50%) and low bioavailability. The novel Ca²⁺/K⁺ (-)-HCA salt (HCA-SX; Super CitriMax) makes HCA fully water-soluble and bioavailable. Efficacious doses of HCA-SX (4500 mg/day t.i.d.) provide 495 mg Ca (49.5% of RDI) and 720 mg K (15% of RDI). Ca²⁺ ions are involved in body weight management by increasing lipid metabolism, enhancing thermogenesis, and increasing bone d. K⁺ ions increase energy, decrease hypertension, increase muscle strength, and regulate heart arrhythmias. Both Ca and K act as buffers in pH homeostasis. In clin. trials, HCA-SX has increased serotonin availability, decreased appetite, increased fat oxidation, improved blood lipid levels, decreased body weight, and modulated several obesity regulatory genes without affecting the mitochondrial and nuclear proteins required for normal biochem. and physiol. functions.
 ST review nutrition hydroxycitric acid calcium potassium salt obesity treatment
 IT Human
 Nutrition, animal
 Obesity
 (dietary supplement Super CitriMax with (-)-hydroxycitric acid calcium-potassium salt and its effectiveness in obesity treatment in humans)
 IT 449158-84-3, Super CitriMax
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (dietary supplement Super CitriMax with (-)-hydroxycitric acid calcium-potassium salt and its effectiveness in obesity treatment in humans)
 RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
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L42 ANSWER 8 OF 21 MEDLINE on STN

AN 2005678942 MEDLINE

DN PubMed ID: 16366421

TI Efficacy of a novel calcium/potassium salt of (-)-hydroxycitric acid in weight control.

AU Preuss H G; Garis R I; Bramble J D; Bagchi D; Bagchi M; Rao C V S; Satyanarayana S

CS Department of Physiology and Biophysics, Georgetown University Medical Center, Basic Science Building, Room 231 B, 4000 Reservoir Rd., N.W., Washington, DC 20057, USA.. preusshg@georgetown.edu

SO International journal of clinical pharmacology research, (2005) Vol. 25, No. 3, pp. 133-44.

Journal code: 8110183. ISSN: 0251-1649.

CY Switzerland

DT Journal; Article; (JOURNAL ARTICLE)

(RANDOMIZED CONTROLLED TRIAL)
(CLINICAL TRIAL)

LA English

FS Priority Journals

EM 200601

ED Entered STN: 22 Dec 2005

Last Updated on STN: 21 Jan 2006

Entered Medline: 20 Jan 2006

AB The **weight-loss** efficacy of a novel, water-soluble, calcium-potassium salt of (-)-**hydroxycitric acid** (HCA-SX) was re-examined in 90 obese subjects (BMI: 30-50.8 kg/m²). We combined data from two previously reported randomized, double-blind, placebo-controlled clinical studies in order to achieve a better statistical evaluation based on a larger population. This re-examination of data also allowed us to reflect more intensely on various aspects of **weight loss** studies. Subjects were randomly divided into three groups: group A received a daily dose of HCA-SX 4, 667 mg (providing 2,800 mg HCA per day); group B was given a daily dose of a combination of HCA-SX 4,667 mg, niacin-bound chromium (NBC) 4 mg (providing 400 microg elemental chromium), and Gymnema sylvestre extract (GSE) 400 mg (providing 100 mg gymnemic acid); and group C received a placebo in three equally divided doses 30-60 min before each meal. All subjects were provided a 2,000 kcal diet/day and participated in a supervised walking program for 30 min/day, 5 days/week. Eighty-two subjects completed the study. At the end of 8 weeks, in group A, both body **weight** and BMI decreased by 5.4%, low-density lipoprotein and triglycerides levels were reduced by 12.9% and 6.9%, respectively, while high-density lipoprotein levels increased by 8.9%, serum leptin levels decreased by 38%, serotonin levels increased by 44.5% and urinary excretion of fat metabolites increased by 32-109%. Group B demonstrated similar beneficial changes, but generally to a greater extent. No significant adverse effects were observed. The combined results confirm that HCA-SX and, to a greater degree, the combination of HCA-SX plus NBC and GSE reduce body **weight** and BMI, suppress appetite, improve blood lipid profiles, increase serum leptin and serotonin levels and increase fat oxidation more than placebo. We conclude that dosage levels, timing of administration, subject compliance and bioavailability of HCA-SX significantly affect results and that when taken as directed, HCA-SX is a highly effective adjunct to healthy **weight** control.

CT Adult

Anti-Obesity Agents: AD, administration & dosage

Anti-Obesity Agents: CH, chemistry

*Anti-Obesity Agents: TU, therapeutic use

Body Mass Index

Body Weight: DE, drug effects

*Calcium: CH, chemistry

Chromium: AD, administration & dosage

Chromium: TU, therapeutic use

Citrates: AD, administration & dosage

Citrates: CH, chemistry

*Citrates: TU, therapeutic use

Double-Blind Method

Drug Therapy, Combination

Gymnema sylvestre: CH, chemistry

Humans

Leptin: BL, blood

Lipids: BL, blood

Middle Aged

Niacin: AD, administration & dosage

Niacin: TU, therapeutic use

*Obesity: DT, drug therapy
 Plant Preparations: AD, administration & dosage
 Plant Preparations: TU, therapeutic use
 *Potassium: CH, chemistry
 Serotonin: BL, blood
 Solubility
 Treatment Outcome

RN 50-67-9 (Serotonin); 59-67-6 (Niacin); 6205-14-7 (hydroxycitric acid); 7440-09-7 (Potassium); 7440-47-3 (Chromium); 7440-70-2 (Calcium)
 CN 0 (Anti-Obesity Agents); 0 (Citrates); 0 (Leptin); 0 (Lipids); 0 (Plant Preparations)

L42 ANSWER 9 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:780373 HCAPLUS

DN 141:289062

ED Entered STN: 24 Sep 2004

TI Method and composition with hydroxycitric acid for decreasing ghrelin levels

IN Bagchi, Debasis; Kothari, Shil

PA Interhealth Nutraceuticals, Inc., USA

SO U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM A61K031-19

INCL 514574000

CC 1-10 (Pharmacology)

Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004186181	A1	20040923	US 2004-805129	20040319
	WO 2004085462	A2	20041007	WO 2004-US8474	20040319
	WO 2004085462	A3	20051013		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2003-456592P P 20030321

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004186181	ICM	A61K031-19
	INCL	514574000
	IPCI	A61K0031-19 [ICM,7]; A61K0031-185 [ICM,7,C*]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	514/574.000
	ECLA	A61K031/19; A61K031/19+M; A61K033/24+M; A61K035/78+M
WO 2004085462	IPCI	C07K [ICM,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0033-24

[I,A]; A61K0033-24 [I,C*]

ECLA A61K031/19; A61K031/19+M; A61K033/24+M; A61K035/78+M

- AB A method and composition are disclosed for reducing **ghrelin** levels in a person or other mammal. The method involves administration of a composition incorporating (-)-hydroxycitric acid in an amount sufficient to **decrease** the **ghrelin** levels in a person or other mammal. The composition comprises (-)-hydroxycitric acid in an amount sufficient to **decrease** the **ghrelin** levels in the person or other mammal. The composition of the method and related composition can also incorporate gymnemic acid, green tea extract, and oxygen coordinated niacin-bound chromium. The method and related composition are effective in reducing **ghrelin** levels in a person or mammal, which decreases feelings of hunger in a person or other mammal and allow for effective weight management. Administration of (-)-hydroxycitric acid-SX (HCA-SX) from *Garcinia cambogia* and HCA-SX + chromium + gymnemic acid reduced food intake by 11.4 % and 17.2 %, resp., compared to placebo.
- ST hydroxycitrate **decreasing ghrelin** hunger; chromium hydroxycitrate gymnemate redn food intake
- IT Gymnema
Gymnema sylvestre
(composition further comprising gymnemic acid from; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT Gymnemic acids
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT Tea products
(green, extract of, composition further comprising; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT Feeding
(hydroxycitric acid administration prior to; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT Body weight
Human
Mammalia
(hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT *Garcinia*
Garcinia cambogia
(hydroxycitric acid from; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT Body weight
(loss; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT Food
(reduction of intake of; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT Alkali metal salts
Alkaline earth salts
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with hydroxycitric acid; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
- IT 58-08-2, Caffeine, biological studies 989-51-5, Epigallocatechin gallate 3081-61-6, Theanine

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (composition further comprising green tea extract containing; hydroxycitric
 acid

for decreasing ghrelin levels and
 decreasing feelings of hunger)

IT 59-67-6D, Niacin, Chromium complexes 7440-47-3, Chromium, biological
 studies 7440-47-3D, Chromium, complexes with niacin
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (composition further comprising; hydroxycitric acid for decreasing
 ghrelin levels and decreasing feelings of hunger)

IT 761458-24-6, HCA-SX 762247-04-1
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (food intake reduction with; hydroxycitric acid for decreasing
 ghrelin levels and decreasing feelings of hunger)

IT 304853-26-7, Ghrelin
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (hydroxycitric acid for decreasing ghrelin levels
 and decreasing feelings of hunger)

IT 7439-93-2D, Lithium, salts with hydroxycitric acid 7439-95-4D,
 Magnesium, salts with hydroxycitric acid 7440-09-7D, Potassium, salts
 with hydroxycitric acid 7440-14-4D, Radium, salts with hydroxycitric
 acid 7440-23-5D, Sodium, salts with hydroxycitric acid 7440-24-6D,
 Strontium, salts with hydroxycitric acid 7440-39-3D, Barium, salts with
 hydroxycitric acid 7440-41-7D, Beryllium, salts with hydroxycitric acid
 7440-46-2D, Cesium, salts with hydroxycitric acid 7440-70-2D, Calcium,
 salts with hydroxycitric acid 7440-73-5D, Francium, salts with
 hydroxycitric acid 27750-10-3, (-)-Hydroxycitric acid
 27750-10-3D, Hydroxycitric acid, group IA metal salts, group IIA
 metal salts 64913-19-5 132436-67-0 185196-38-7
 213385-58-1 449158-84-3 760962-71-8
 761426-32-8, Cesium hydroxycitrate 761426-33-9, Francium
 hydroxycitrate 761426-34-0, Beryllium hydroxycitrate
 761426-35-1, Strontium hydroxycitrate 761426-36-2,
 Barium hydroxycitrate 761426-37-3, Radium hydroxycitrate
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hydroxycitric acid for decreasing ghrelin levels
 and decreasing feelings of hunger)

L42 ANSWER 10 OF 21 MEDLINE on STN

AN 2004332602 MEDLINE

DN PubMed ID: 15234082

TI Safety assessment of (-)-hydroxycitric acid and Super CitriMax,
 a novel calcium/potassium salt.

AU Soni M G; Burdock G A; Preuss H G; Stohs S J; Ohia S E; Bagchi D

CS Burdock Group, 780 US Highway 1, Suite 300, Vero Beach, FL 32962, USA..
 msoni@burdockgroup.com

SO Food and chemical toxicology : an international journal published for the
 British Industrial Biological Research Association, (2004 Sep) Vol. 42,
 No. 9, pp. 1513-29. Ref: 82
 Journal code: 8207483. ISSN: 0278-6915.

CY England: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

LA English

FS Priority Journals

EM 200408

ED Entered STN: 7 Jul 2004
 Last Updated on STN: 11 Aug 2004
 Entered Medline: 10 Aug 2004

AB (-)-**Hydroxycitric acid** (HCA) is a principle constituent (10-30%) of the dried fruit rind of *Garcinia cambogia*, a plant native to Southeastern Asia. The dried rind has been used for centuries throughout Southeast Asia as a food preservative, flavoring agent and carminative. Extensive experimental studies show that HCA inhibits fat synthesis and reduces food intake. The objective of this review is to systematically review the available safety/toxicity literature on HCA to determine its safety in-use. The primary mechanism of action of HCA appears to be related to its ability to act as a competitive inhibitor of the enzyme ATP-citrate lyase, which catalyzes the conversion of citrate and coenzyme A to oxaloacetate and acetyl coenzyme A (acetyl-CoA), primary building blocks of fatty acid and cholesterol synthesis. Super CitriMax, a novel calcium/potassium-HCA extract (HCA-SX), is considerably more soluble and bioavailable than calcium-based HCA ingredients. Acute oral toxicity studies in animals demonstrate that CitriMax (50% HCA as calcium salt) has a low acute oral toxicity. In a subchronic study in rats, the gavage administration of HCA-SX at doses up to 2500 mg/kg/day for a period of 90 days caused a significant decrease in body **weight** and reduction in feed consumption without any adverse effects. The structure, mechanism of action, long history of use of HCA and other toxicity studies indicate that HCA-SX is unlikely to cause reproductive or developmental effects. HCA-SX was not mutagenic in the presence or absence of metabolic activation in Ames genotoxicity assays in strains TA98 and TA102. HCA-SX-induced increases in number of revertants in other strains (TA100 and TA1535 in the absence of metabolic activation and in strain TA1537 in the presence of metabolic activation) but these were not considered as biologically indicative of a mutagenic effect. In several, placebo-controlled, double-blind trials employing up to 2800 mg/day HCA, no treatment-related adverse effects were reported. There is sufficient qualitative and quantitative scientific evidence, including animal and human data suggesting that intake of HCA at levels up to 2800 mg/day is safe for human consumption.

CT Animals
 *Appetite Depressants: TO, toxicity
 *Citrates: TO, toxicity
 Dose-Response Relationship, Drug
 *Food Additives: TO, toxicity
 **Garcinia cambogia*: CH, chemistry
 Humans
 *Plant Extracts: TO, toxicity
 Risk Assessment
 Toxicity Tests

RN 6205-14-7 (**hydroxycitric acid**)
 CN 0 (Appetite Depressants); 0 (Citrates); 0 (Food Additives); 0 (Plant Extracts)

L42 ANSWER 11 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
 AN 2004:554747 HCAPLUS
 DN 141:313510
 ED Entered STN: 12 Jul 2004
 TI Body weight and abdominal fat gene expression profile in response to a novel hydroxycitric acid-based dietary supplement
 AU Roy, Sashwati; Rink, Cameron; Khanna, Savita; Phillips, Christina; Bagchi, Debasis; Bagchi, Manashi; Sen, Chandan K.
 CS Laboratory of Molecular Medicine, Department of Surgery, The Ohio State University Medical Center, Columbus, OH, 43210, USA
 SO Gene Expression (2004), Volume Date 2003, 11(5/6), 251-262

CODEN: GEEXEJ; ISSN: 1052-2166

PB Cognizant Communication Corp.

DT Journal

LA English

CC 18-7 (Animal Nutrition)

AB Obesity is a global public health problem, with .apprx.315 million people worldwide estimated to fall into the WHO-defined obesity categories. Botanical dietary supplements often contain complex mixts. of phytochems. with additive and/or synergistic interactions. The dried fruit rind of *Garcinia cambogia*, (Malabar tamarind) is a unique source of (-)-hydroxycitric acid (HCA) with distinct sour taste. It has been safely used for centuries in Southeastern Asia to make meals more filling. The HCA-SX (Super Citrimax; novel derivative of HCA) dietary supplement is safe when taken orally. HCA-SX is bioavailable as determined by GC-MS anal. of human blood plasma. Although HCA-SX is conditionally effective in body weight management in exptl. animals and humans, its mechanism of action remains unclear. The effects of low-dose oral HCA-SX treatment on body weight and abdominal fat gene expression profile were studied in adult Sprague-Dawley rats. At doses relevant for human consumption, the dietary HCA-SX contained body weight growth. This was associated with decreased abdominal fat leptin expression, while plasma leptin levels remained unaffected. Repeated high-d. microarray anal. of 9960 genes and ESTs present in the fatty tissue identified a small set (.apprx.1% of all genes screened) of specific genes sensitive to dietary HCA-SX. Other genes, including vital genes transcribing for mitochondrial/nuclear proteins and which are necessary for fundamental support of the tissue, were not affected by HCA-SX. Under these exptl. conditions, HCA-SX was effective in restricting body weight gain in adult rats. Functional characterization of HCA-SX-sensitive genes revealed that upregulation of genes encoding serotonin receptors was a distinct effect of dietary HCA-SX supplementation.

ST nutrition hydroxycitrate supplement body wt adipose tissue gene expression

IT Transport proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT-1 (glucose transporter 1); body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)

IT Transport proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT-4 (glucose transporter 4); body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)

IT Adipose tissue

Blood plasma

Body weight

Gene expression profiles, animal

Nutrition, animal

(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)

IT 169494-85-3, Leptin

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)

IT 27750-10-3, (-)-Hydroxycitric acid

RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in

adult Sprague-Dawley rats)

IT 449158-84-3, Super Citrimax;

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)

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L42 ANSWER 12 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3

AN 2004:350574 HCAPLUS

DN 141:17433

ED Entered STN: 30 Apr 2004

TI Physico-chemical properties of a novel (-)-hydroxycitric acid extract and its effect on body weight, selected organ weights, hepatic lipid peroxidation and DNA fragmentation, hematology and clinical chemistry, and histopathological changes over a period of 90 days

AU Shara, Michael; Ohia, Sunny E.; Schmidt, Robert E.; Yasmin, Taharat; Zardetta-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; **Bagchi, Debasis**; Stohs, Sidney J.

CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, USA

SO Molecular and Cellular Biochemistry (2004), 260(1&2), 171-186

CODEN: MCBIB8; ISSN: 0300-8177

PB Kluwer Academic Publishers

DT Journal

LA English

CC 1-11 (Pharmacology)

AB *Garcinia cambogia*-derived (-)-hydroxycitric acid (HCA) is a popular and natural supplement for weight management. HCA is a competitive inhibitor of the enzyme ATP citrate lyase, which catalyzes the conversion of citrate and CoA to oxaloacetate and acetyl CoA (acetyl CoA) in the cytosol. Acetyl CoA is used in the synthesis of fatty acids, cholesterol and triglycerides, and in the synthesis of acetylcholine in the central nervous system. Studies have demonstrated the efficacy of a novel 60% calcium-potassium salt of HCA derived from *Garcinia cambogia* (HCA-SX, Super CitriMax) in weight management. Results have shown that HCA-SX promotes fat oxidation, enhances serotonin release and availability in the brain cortex, normalizes lipid profiles, and lowers serum leptin levels in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity, as well as Ames bacterial reverse mutation studies and mouse lymphoma tests have demonstrated the safety of HCA-SX. However, no detailed long-term safety of HCA-SX or any other HCA extract has been previously assessed. We evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical over a period of 90 days. Furthermore, a 90-day histopathol. evaluation was conducted. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX of feed intake and were sacrificed on 30, 60 or 90 days of treatment. The body weight and selected organ wts. were assessed and correlated as a % of body weight and brain weight at 90 days of treatment. A significant reduction in body weight was observed in treated rats as compared to control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats, while no such difference in hepatic DNA fragmentation was observed as compared to the control animals. Furthermore, selected organ wts. individually and as a % of body weight and brain weight at 90 days of treatment exhibited no significant difference between the groups. No difference was observed in hematol. and clin. chemical or the histopathol. evaluation. Taken together, these results show that 90 day treatment of HCA-SX results in a reduction in body weight, and does not cause any changes in major organs or in hematol., clin. chemical, and histopathol.

ST hydroxycitrate body wt liver lipid peroxidn DNA fragmentation hematol; Super CitriMax antiobesity obese liver lipid peroxidn organ wt

IT Antiobesity agents
Body weight

Garcinia cambogia
Lipid peroxidation
Obesity

(effect (-)-hydroxycitric acid extract on body weight, selected organ wts.,
hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin.
chemical, and histopathol. changes over a period of 90 days)

IT DNA fragmentation

Lipid peroxidation

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(effect (-)-hydroxycitric acid extract on body weight, selected organ wts.,
hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin.
chemical, and histopathol. changes over a period of 90 days)

IT Natural products, pharmaceutical

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)

(effect (-)-hydroxycitric acid extract on body weight, selected organ wts.,
hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin.
chemical, and histopathol. changes over a period of 90 days)

IT Adrenal gland

Brain

Heart

Kidney

Liver

Ovary

Prostate gland

Seminal vesicle

Spleen

Thymus gland

Uterus

(weight; effect (-)-hydroxycitric acid extract on body weight, selected

organ

wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin.
chemical, and histopathol. changes over a period of 90 days)

IT 449158-84-3, Super CitriMax

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU
(Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(effect (-)-hydroxycitric acid extract on body weight, selected organ wts.,
hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin.
chemical, and histopathol. changes over a period of 90 days)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L42 ANSWER 13 OF 21 MEDLINE on STN
 AN 2004163178 MEDLINE
 DN PubMed ID: 15056124
 TI Effects of a natural extract of (-)-**hydroxycitric** acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and *Gymnema sylvestre* extract on **weight** loss.
 AU Preuss H G; **Bagchi** D; Bagchi M; Rao C V S; Dey D K; Satyanarayana S
 CS Department of Physiology and Biophysics, Georgetown University Medical Center, Georgetown, Washington, DC 20057, USA.. preusshg@georgetown.edu
 SO Diabetes, obesity & metabolism, (2004 May) Vol. 6, No. 3, pp. 171-80. Journal code: 100883645. ISSN: 1462-8902.
 CM Comment in: Diabetes Obes Metab. 2004 Nov;6(6):458-9; author reply 460-1. PubMed ID: 15479223
 CY England: United Kingdom
 DT (CLINICAL TRIAL)
 Journal; Article; (JOURNAL ARTICLE)
 (RANDOMIZED CONTROLLED TRIAL)
 LA English
 FS Priority Journals
 EM 200407
 ED Entered STN: 2 Apr 2004
 Last Updated on STN: 21 Jul 2004
 Entered Medline: 20 Jul 2004
 AB AIM: The efficacy of optimal doses of highly bioavailable (-)-**hydroxycitric** acid (HCA-SX) alone and in combination with niacin-bound chromium (NBC) and a standardized *Gymnema sylvestre* extract (GSE) on **weight** loss in moderately obese subjects was evaluated by monitoring changes in body **weight**, body mass index (BMI), appetite, lipid profiles, serum leptin and excretion of urinary fat metabolites. HCA-SX has been shown to reduce appetite, inhibit fat synthesis and decrease body **weight** without stimulating the central nervous system. NBC has demonstrated its ability to maintain healthy insulin levels, while GSE has been shown to regulate **weight** loss and blood sugar levels. METHODS: A randomized, double-blind, placebo-controlled human study was conducted in Elluru, India for 8 weeks in 60 moderately obese subjects (ages 21-50, BMI >26 kg/m(2)). Subjects were randomly divided into three groups. Group A was administered HCA-SX 4667 mg, group B was administered a combination of HCA-SX 4667 mg, NBC 4 mg and GSE 400 mg, while group C was given placebo daily in three equally divided doses 30-60 min before meals. All subjects received a 2000 kcal diet/day and participated in supervised walking. RESULTS: At the end of 8 weeks, body **weight** and BMI decreased by 5-6% in both groups A and B. Food intake, total cholesterol, low-density lipoproteins, triglycerides and serum leptin levels were significantly reduced in both groups, while high-density lipoprotein levels and excretion of urinary fat metabolites increased in both groups. A marginal or non-significant effect was observed in all parameters in group C. CONCLUSION: The present study shows that optimal doses of HCA-SX and, to a greater degree, the combination of HCA-SX, NBC and GSE can serve as an effective and safe **weight**-loss formula that can facilitate a reduction in excess body **weight** and BMI, while promoting healthy blood lipid levels.
 CT Check Tags: Female

Adult
Appetite: DE, drug effects
Biological Markers: AN, analysis
Body Mass Index
*Chromium: AD, administration & dosage
 *Citrates: AD, administration & dosage
Double-Blind Method
Drug Therapy, Combination
Fats: ME, metabolism
*Gymnema sylvestre
Humans
Leptin: BL, blood
Lipids: BL, blood
Lipoproteins, HDL: BL, blood
Lipoproteins, LDL: BL, blood
Middle Aged
Niacin
Obesity: BL, blood
*Obesity: DT, drug therapy
Obesity: UR, urine
Plant Extracts: TU, therapeutic use
 Weight Loss: DE, drug effects

RN 59-67-6 (Niacin); 6205-14-7 (hydroxycitric acid); 7440-47-3
(Chromium)
CN 0 (Biological Markers); 0 (Citrates); 0 (Fats); 0 (Leptin); 0 (Lipids); 0
(Lipoproteins, HDL); 0 (Lipoproteins, LDL); 0 (Plant Extracts)

L42 ANSWER 14 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:78695 HCAPLUS

DN 140:264206

ED Entered STN: 30 Jan 2004

TI Efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX)
and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre
extract in weight management in human volunteers: a pilot study

AU Preuss, Harry G.; Bagchi, Debasis; Bagchi, Manashi; Rao, C. V.
Sanyasi; Satyanarayana, S.; Dey, Dipak K.

CS Dept. of Physiology and Biophysics, Georgetown University Medical Center,
Washington, DC, 20057, USA

SO Nutrition Research (New York, NY, United States) (2004), 24(1), 45-58
CODEN: NTRSDC; ISSN: 0271-5317

PB Elsevier Science Inc.

DT Journal

LA English

CC 1-10 (Pharmacology)

AB In this pilot study, the efficacy of a novel, natural extract of a highly
bioavailable, calcium-potassium salt of (-)-hydroxycitric acid (HCA-SX)
alone and in combination with a niacin-bound chromium (NBC) and Gymnema
sylvestra extract (GSE) was evaluated for weight loss in moderately obese
subjects by monitoring changes in body weight, body mass index (BMI),
appetite, lipid profiles, serum leptin and serotonin levels, and enhanced
excretion of urinary fat metabolites. Garcinia cambogia-derived
(-)-hydroxycitric acid (HCA) has been shown to reduce appetite, inhibit
fat synthesis and decrease body weight without stimulating the central
nervous system. NBC has shown the ability to restore insulin function,
metabolize fat, turn protein into muscle, and convert sugar into energy,
which plays a role in appetite regulation and facilitates weight loss.
Gymnema sylvestre is a traditional herb that helps to promote weight loss
possibly through its ability to reduce cravings for sweets and control
blood sugar levels. A randomized, double-blind, placebo-controlled human
clin. study was conducted in thirty obese subjects (ages 21-50, BMI>26

kg/m²) for eight weeks in Elluru, India. The subjects were randomly divided into three groups (10 subjects/group) and given HCA-SX 4,667 mg (60% HCA providing 2,800 mg HCA/day) (Group A), a combination of HCA-SX 4,667 mg, NBC 4 mg (providing 400 µg elemental Cr) and GSE 400 mg (providing 100 mg gymnemic acid) (Group B), or placebo (Group C) daily in 3 equally divided doses 30-60 min before each meal. This HCA-SX dose was extrapolated from previously conducted in vitro and in vivo studies. In addition, subjects received 2,000 kcal diet/day and underwent a 30 min/day supervised walking program, 5 days/wk. At the end of 8 wk, body weight and BMI decreased by 6.3%, resp., in Group A. Food intake was reduced by 4%. Total cholesterol, LDL and triglycerides levels were reduced by 6.3%, 12.3% and 8.6%, resp., while HDL and serotonin levels increased by 10.7% and 40%, resp. Serum leptin levels were decreased by 36.6%, and the enhanced excretion of urinary fat metabolites, including malondialdehyde (MDA), acetaldehyde (ACT), formaldehyde (FA) and acetone (ACON), increased by 125-258%. Under these same conditions, Group B reduced body weight and BMI by 7.8% and 7.9%, resp. Food intake was reduced by 14.1%. Total cholesterol, LDL and triglyceride levels were reduced by 9.1%, 17.9% and 18.1%, resp., while HDL and serotonin levels increased by 20.7% and 50%, resp. Serum leptin levels decreased by 40.5% and enhanced excretion of urinary fat metabolites increased by 146-281%. Group C reduced body weight and BMI by only 1.6% and 1.7%, resp., food intake was increased by 2.8%, and LDL, triglycerides and total cholesterol decreased by 0.8%, 0.2% and 0.8%, resp. HDL were reduced by 4.1% while serum leptin levels were increased by 0.3%, and excretion of urinary fat metabolites did not change in MDA, ACT and FA, and marginally increased in the case of ACON. No adverse effects were observed. Results demonstrate that HCA-SX and, to a greater degree, the combination of HCA-SX, NBC and GSE can serve as safe weight management supplements.

ST hydroxycitrate niacin chromium Gymnema ext obesity

IT Glycerides, biological studies

Lipids, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(blood; efficacy of a novel, natural extract of (-)-hydroxycitric acid

(HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema

sylvestre extract in weight management in human volunteers: a pilot study)

IT Appetite depressants

Drug interactions

Gymnema sylvestre

Human

Obesity

(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX)

and a combination of HCA-SX, niacin-bound chromium and Gymnema

sylvestre extract in weight management in human volunteers: a pilot study)

IT High-density lipoproteins

Low-density lipoproteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX)

and a combination of HCA-SX, niacin-bound chromium and Gymnema

sylvestre extract in weight management in human volunteers: a pilot study)

IT 50-00-0, Formaldehyde, biological studies 50-67-9, Serotonin, biological

studies 57-88-5, Cholesterol, biological studies 67-64-1, Acetone,

biological studies 75-07-0, Acetaldehyde, biological studies 542-78-9,

Malondialdehyde 169494-85-3, Leptin

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX)

and a combination of HCA-SX, niacin-bound chromium and Gymnema

sylvestre extract in weight management in human volunteers: a pilot study)

IT 59-67-6, Niacin, biological studies 7440-47-3, Chromium, biological

studies 27750-10-3, (-)-Hydroxycitric acid

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre extract in weight management in human volunteers: a pilot study)

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD

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AN 2003:376628 HCAPLUS

DN 138:348725

ED Entered STN: 16 May 2003
 TI Method and composition using niacin-bound chromium for preventing or reducing the symptoms of insulin resistance syndrome
 IN Bagchi, Debasis; Preuss, Harry G.; Kothari, Shil C.
 PA Interhealth Nutraceuticals, Inc., USA
 SO PCT Int. Appl., 15 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K031-28
 ICS A61K031-44
 CC 1-10 (Pharmacology)
 Section cross-reference(s): 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003039535	A1	20030515	WO 2002-US31987	20021007
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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CA 2462158	AA	20030515	CA 2002-2462158	20021007
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
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PRAI US 2001-327896P	P	20011005		
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WO 2002-US31987	W	20021007		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003039535	ICM	A61K031-28
	ICS	A61K031-44
	IPCI	A61K0031-28 [ICM,7]; A61K0031-44 [ICS,7]
	IPCR	A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,A]; A61K0031-185 [I,C*]; A61K0031-194 [I,A]; A61K0031-28 [I,A]; A61K0031-28 [I,C*]; A61K0031-44 [I,A]; A61K0031-44 [I,C*]; A61K0031-455 [I,A]; A61K0031-455 [I,C*]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-30 [I,A]; A61K0033-30 [I,C*]
	ECLA	A61K031/28; A61K031/44
US 2003133992	IPCI	A61K0033-32 [ICM,7]; A61K0033-04 [ICS,7]; A61K0031-7048 [ICS,7]; A61K0031-7042 [ICS,7,C*]; A61K0031-704 [ICS,7]; A61K0031-7028 [ICS,7,C*]; A61K0031-095 [ICS,7]; A61K0031-05 [ICS,7]; A61K0031-045 [ICS,7,C*]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
	IPCR	A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,C*];

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 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A];
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 [I,A]; A61K0033-04 [I,C*]; A61K0033-32 [I,A];
 A61K0033-32 [I,C*]
 NCL 424/643.000; 424/702.000; 514/027.000; 514/033.000;
 514/184.000; 514/557.000; 514/574.000; 514/706.000;
 514/733.000
 ECLA A61K031/05; A61K031/05+M; A61K031/095; A61K031/095+M;
 A61K031/19; A61K031/19+M; A61K031/704; A61K031/704+M;
 A61K031/7048; A61K031/7048+M; A61K033/04+M;
 A61K033/24+M; A61K033/30+M; A61K045/06
 CA 2462158 IPCI A61K0031-28 [ICM,7]; A61K0031-44 [ICS,7]
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 IPCR A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095
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 A61K0033-30 [I,A]; A61K0033-30 [I,C*]
 ECLA A61K031/28; A61K031/44
 JP 2005508371 IPCI A61K0031-455 [ICM,7]; A61K0031-05 [ICS,7]; A61K0031-045
 [ICS,7,C*]; A61K0031-10 [ICS,7]; A61K0031-095
 [ICS,7,C*]; A61K0031-194 [ICS,7]; A61K0031-185
 [ICS,7,C*]; A61K0031-353 [ICS,7]; A61K0031-352
 [ICS,7,C*]; A61K0031-704 [ICS,7]; A61K0031-7028
 [ICS,7,C*]; A61K0033-04 [ICS,7]; A61K0033-24 [ICS,7];
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 [ICS,7,C*]; C07D0213-80 [ICS,7]; C07D0213-00 [ICS,7,C*]
 IPCR A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095
 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,A];
 A61K0031-185 [I,C*]; A61K0031-194 [I,A]; A61K0031-28
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 A61K0031-44 [I,C*]; A61K0031-455 [I,A]; A61K0031-455
 [I,C*]; A61K0033-04 [I,A]; A61K0033-04 [I,C*];
 A61K0033-30 [I,A]; A61K0033-30 [I,C*]
 FTERM 4C055/AA01; 4C055/BA01; 4C055/CA57; 4C055/DA01;
 4C055/GA01; 4C086/AA01; 4C086/AA02; 4C086/BA08;
 4C086/BC19; 4C086/EA19; 4C086/HA03; 4C086/HA08;
 4C086/MA03; 4C086/MA04; 4C086/MA52; 4C086/NA14;
 4C086/ZA36; 4C086/ZA42; 4C086/ZA45; 4C086/ZA70;
 4C086/ZB22; 4C086/ZC03; 4C086/ZC33; 4C086/ZC35;
 4C206/AA01; 4C206/AA02; 4C206/CA19; 4C206/DA39;
 4C206/JA22; 4C206/KA04; 4C206/KA17; 4C206/MA03;
 4C206/MA04; 4C206/MA72; 4C206/NA14; 4C206/ZA36;
 4C206/ZA42; 4C206/ZA45; 4C206/ZA70; 4C206/ZB22;
 4C206/ZC03; 4C206/ZC33; 4C206/ZC35
 ZA 2004002688 IPCI A61K0031-28 [ICM]
 ECLA A61K031/28; A61K031/44
 US 2005100614 IPCI A61K0031-555 [ICM,7]; A61K0031-704 [ICS,7];
 A61K0031-7028 [ICS,7,C*]; A61K0031-7048 [ICS,7];
 A61K0031-7042 [ICS,7,C*]; A61K0031-05 [ICS,7];
 A61K0031-045 [ICS,7,C*]; A61K0033-04 [ICS,7];
 A61K0033-32 [ICS,7]; A61K0031-19 [ICS,7]; A61K0031-185
 [ICS,7,C*]

IPCR A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-32 [I,A]; A61K0033-32 [I,C*]
 NCL 424/643.000; 424/702.000; 514/027.000; 514/033.000; 514/184.000; 514/456.000; 514/517.000; 514/574.000; 514/733.000
 ECLA A61K031/05; A61K031/05+M; A61K031/095; A61K031/095+M; A61K031/19; A61K031/19+M; A61K031/704; A61K031/704+M; A61K031/7048; A61K031/7048+M; A61K033/04+M; A61K033/24+M; A61K033/30+M; A61K045/06
 US 2005202101 IPCI A61K0031-555 [ICM,7]; A61K0033-04 [ICS,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
 IPCR A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-32 [I,A]; A61K0033-32 [I,C*]
 NCL 424/641.000; 424/702.000; 514/184.000; 514/574.000; 514/733.000
 ECLA A61K031/05; A61K031/05+M; A61K031/095; A61K031/095+M; A61K031/19; A61K031/19+M; A61K031/704; A61K031/704+M; A61K031/7048; A61K031/7048+M; A61K033/04+M; A61K033/24+M; A61K033/30+M; A61K045/06
 AB A method for preventing and or reducing the symptoms of insulin resistance and a related syndrome in persons comprises identifying persons having or at risk for having such symptoms and administering to them an effective amount of a composition comprising niacin-bound chromium that prevents or reduces the symptoms. Compns. incorporating niacin-bound chromium and addnl. compds. also are disclosed that are particularly effective in synergistically preventing or reducing these symptoms.
 ST insulin resistance syndrome treatment niacin bound chromium
 IT Aglycons
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (anthocyanidins; niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome, and use with other agents)
 IT Drug delivery systems
 Human
 (niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome)
 IT Saponins
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome, and use with other agents)
 IT 9004-10-8, Insulin, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome)
 IT 59-67-6D, Niacin, chromium-bound, biological studies 7440-47-3D, Chromium, niacin-bound
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome)

IT 501-36-0, trans-Resveratrol 539-86-6, Allicin 1399-64-0, Gymnemic acid 7440-66-6, Zinc, biological studies 7782-49-2, Selenium, biological studies 27750-10-3, (-)-Hydroxycitric acid

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome, and use with other agents)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L42 ANSWER 16 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

AN 2003:694006 HCAPLUS

DN 140:93082

ED Entered STN: 05 Sep 2003

TI Effects of niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid on the metabolic syndrome in aged diabetic Zucker fatty rats

AU Talpur, Nadeem; Echard, Bobby W.; Yasmin, Taharat; **Bagchi, Debasis**; Preuss, Harry G.

CS Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC, USA

SO Molecular and Cellular Biochemistry (2003), 252(1&2), 369-377
CODEN: MCBIB8; ISSN: 0300-8177

PB Kluwer Academic Publishers

DT Journal

LA English

CC 18-1 (Animal Nutrition)

Section cross-reference(s): 14

AB Previous studies have demonstrated that niacin-bound chromium (NBC), Maitake mushroom, and (-)-hydroxycitric acid (HCA-SX) can ameliorate hypertension, dyslipidemia, and diabetes mellitus. They may be useful in body weight (BW) management. We used aged diabetic Zucker fatty rats (ZFR, 70-75 wk old) to determine whether NBC, fraction SX of Maitake mushroom (MSX), and 60% (-)-hydroxycitric acid (HCA-SX) from Garcinia cambogia, alone or in combination, can affect the metabolic syndrome X. The metabolic syndrome X is a concurrence of disturbed glucose and insulin metabolism, overweight, abdominal fat distribution, mild dyslipidemia, and hypertension, all of which are associated with subsequent development of type 2 diabetes mellitus and cardiovascular disease. Four groups of 8 ZFR were gavaged daily with the 3 different supplements. For the initial 3 wk, the control ZFR received only water, the second group received NBC with 40 µg elemental Cr/day, the third group MSX at 100 mg/day, and the fourth group HCA-SX at 200 mg/day. During weeks 4-6, the doses in each treatment were doubled. The control rats lost each .apprx.50 g BW over 6 wk of treatment, which is characteristic of these animals in declining health. The 8 ZFR receiving NBC lost each .apprx.9 g BW, while rats fed MSX lost each 16 g BW. ZFR fed HCA-SX simulated the pattern in the control group, as they lost each .apprx.46 g BW. The wide individual variations resulted in a lack of statistical significance among the groups. Nevertheless, 75% ZFR in the control group lost >50 g BW over 6 wk, whereas none of the ZFR fed NBC, 25% ZFR fed MSX, and 57% ZFR fed HCA-SX lost >50 g BW over 6 wk. ZFR in all 3 treatment groups had lower blood pressures compared to controls and this effect seemed to be dose related. The general trend was for renal and liver blood parameters, hepatic and renal lipid peroxidn.,

and DNA fragmentation to improve due to the supplementation with these natural products. Combination treatment with the 3 supplements led to lower systolic blood pressure and maintenance of BW compared to controls. Elderly diabetics and even aging individuals might benefit from similar dietary regimen.

ST nutrition chromium Maitake mushroom hydroxycitrate blood pressure body wt

IT Blood

Blood pressure

Body weight

Grifola frondosa

Kidney

Lipid peroxidation

Liver

Nutrition, animal

(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT DNA

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT Metabolic disorders

(metabolic syndrome X; dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT 50-99-7, D-Glucose, biological studies 57-13-6, Urea, biological studies 60-27-5, Creatinine 9000-86-6, Alt 9000-97-9, Ast

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT 7440-47-3, Chromium, biological studies 27750-10-3,

(-)-Hydroxycitric acid 64452-96-6, 3-Pyridinecarboxylic acid, chromium(3+) salt

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L42 ANSWER 17 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

AN 2003:871815 HCAPLUS

DN 140:264420

ED Entered STN: 07 Nov 2003

TI Dose- and time-dependent effects of a novel (-)-hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidation, DNA fragmentation and histopathological data over a period of 90 days

AU Shara, Michael; Ohia, Sunney E.; Yasmin, Taharat; Zardetto-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; **Bagchi, Debasis**; Stohs, Sidney J.

CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, 68178, USA

SO *Molecular and Cellular Biochemistry* (2003), 254(1&2), 339-346
CODEN: MCBIB8; ISSN: 0300-8177

PB Kluwer Academic Publishers

DT Journal

LA English

CC 1-12 (Pharmacology)

Section cross-reference(s): 11

AB (-)-Hydroxycitric acid (HCA), a natural extract from the dried fruit rind of *Garcinia cambogia* (family Guttiferae), is a popular supplement for weight management. The dried fruit rind has been used for centuries as a condiment in Southeastern Asia to make food more filling and satisfying. A significant number of studies highlight the efficacy of Super CitriMax (HCA-SX, a novel 60% calcium-potassium salt of HCA derived from *Garcinia cambogia*) in weight management. These studies also demonstrate that HCA-SX promotes fat oxidation, inhibits ATP-citrate lyase (a building block for fat synthesis), and lowers the level of leptin in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity studies have demonstrated the safety of HCA-SX. However, no long-term safety of HCA-SX or any other (-)-hydroxycitric acid extract has been previously assessed. In this study, we have evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body weight,

hepatic and testicular lipid peroxidn., DNA fragmentation, liver and testis weight, expressed as such and as a % of body weight and brain weight, and histopathol. changes over a period of 90 days. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX as feed intake and the animals were sacrificed on 30, 60 or 90 days of treatment. The feed and water intake were assessed and correlated with the reduction in body weight. HCA-SX supplementation demonstrated a reduction in body weight in both male and female rats over a period of 90 days as compared to the corresponding control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats as compared to the corresponding control animals. However, no such difference in hepatic DNA fragmentation and testicular lipid peroxidn. and DNA fragmentation was observed. Furthermore, liver and testis weight, expressed as such and as a percentage of body weight and brain weight, at 30, 60 and 90 days of treatment, exhibited no significant difference between the four groups. Taken together, these results indicate that treatment of HCA-SX over a period of 90 days results in a reduction in body weight, but did not cause any changes in hepatic and testicular lipid peroxidn., DNA fragmentation, or histopathol. changes.

ST hydroxycitrate wt management liver testis lipid peroxidn DNA fragmentation
IT Behavior
(drinking; effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Apoptosis
Body weight
Feeding
Lipid peroxidation
Liver
Testis
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT DNA fragmentation
Lipid peroxidation
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Natural products, pharmaceutical
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT 27750-10-3, (-)-Hydroxycitric acid 449158-84-3, Super CitriMax
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
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AN 2002:777638 HCAPLUS

DN 137:257682

ED Entered STN: 11 Oct 2002

TI Method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compositions thereof

IN Ohia, Sunny E.; Preuss, Harry G.; **Bagchi, Debasis**

PA Interhealth Nutraceuticals, Inc., USA

SO PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K

CC 1-11 (Pharmacology)

Section cross-reference(s): 63

FAN.CNT 1

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PI	WO 2002078616	A2	20021010	WO 2002-US10368	20020401
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CLASS

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FTERM 4B018/LB08; 4B018/MD05; 4B018/MD09; 4B018/MD23; 4B018/MD48; 4B018/ME14; 4B018/MF01; 4B018/MF02; 4C076/AA11; 4C076/AA30; 4C076/AA36; 4C076/AA53; 4C076/AA69; 4C076/BB01; 4C076/CC01; 4C086/AA02; 4C086/EA10; 4C086/HA08; 4C086/MA03; 4C086/MA04; 4C086/MA16; 4C086/MA35; 4C086/MA37; 4C086/MA43; 4C086/MA47; 4C086/MA52; 4C086/NA06; 4C086/ZA02; 4C086/ZA05; 4C086/ZA12; 4C086/ZA70; 4C088/AB11; 4C088/BA08; 4C088/MA09; 4C088/MA16; 4C088/MA35; 4C088/MA37; 4C088/MA43; 4C088/MA47; 4C088/MA52; 4C088/NA06; 4C088/ZA02; 4C088/ZA05; 4C088/ZA12; 4C088/ZA70; 4C206/AA02; 4C206/DA36; 4C206/MA03; 4C206/MA04; 4C206/MA28; 4C206/MA30; 4C206/MA37; 4C206/MA55; 4C206/MA57; 4C206/MA63; 4C206/MA67; 4C206/MA72; 4C206/NA06; 4C206/ZA02; 4C206/ZA05; 4C206/ZA12; 4C206/ZA70

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NCL 514/574.000

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 NCL 514/033.000; 514/184.000; 514/574.000

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NCL 424/777.000; 514/184.000; 514/574.000
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 NCL 424/777.000; 514/184.000; 514/574.000
 ECLA A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194;
 A61K031/194+M; A61K031/555+M; A61K031/704+M;
 A61K033/24+M; A61K035/78+M
 US 2005013887 IPCI A61K0031-555 [ICM,7]; A61K0035-78 [ICS,7]; A61K0031-19
 [ICS,7]; A61K0031-185 [ICS,7,C*]
 IPCR A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304
 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*];
 A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555
 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*];
 A61K0031-704 [I,A]; A61K0033-24 [I,A]; A61K0033-24
 [I,C*]
 NCL 424/777.000; 514/184.000; 514/559.000; 514/574.000
 ECLA A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194;
 A61K031/194+M; A61K031/555+M; A61K031/704+M;
 A61K033/24+M; A61K035/78+M
 AB A method for increasing serotonin levels in a person includes identifying
 a person having a deficient serotonin level and administering to the
 person a composition incorporating hydroxycitric acid, preferably in the form
 of an extract of Garcinia cambogia, in an amount sufficient to increase the
 person's serotonin levels. The method also can incorporate administering
 chromium, preferably in the form of oxygen-coordinated, niacin-bound
 chromium, and gymnemic acid, preferably in the form of an extract of Gymnema
 sylvestre, to synergistically work to further increase serotonin levels in
 the person.
 ST hydroxycitrate chromium gymnemin Garcinia Gymnema serotonin appetite
 disorder depression
 IT Sleep
 (-waking cycle; method for increasing serotonin levels in a person by
 administration of a composition incorporating (-)-hydroxycitric acid, and
 related compns. thereof)
 IT Drug delivery systems
 (capsules; method for increasing serotonin levels in a person by
 administration of a composition incorporating (-)-hydroxycitric acid, and
 related compns. thereof)
 IT Brain
 (cerebral cortex; method for increasing serotonin levels in a person by
 administration of a composition incorporating (-)-hydroxycitric acid, and
 related compns. thereof)
 IT Mental and behavioral disorders
 (depression; method for increasing serotonin levels in a person by
 administration of a composition incorporating (-)-hydroxycitric acid, and
 related compns. thereof)
 IT Drug delivery systems
 (gum; method for increasing serotonin levels in a person by
 administration of a composition incorporating (-)-hydroxycitric acid, and
 related compns. thereof)
 IT Eating disorders

- (hyperphagia; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Drug delivery systems
(liqs.; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Body weight
(loss; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Drug delivery systems
(lozenges; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Antidepressants
Anxiety
Anxiolytics
Appetite
Bulimia
Energy metabolism, animal
Food
Garcinia cambogia
Gymnema sylvestre
Human
Insomnia
(method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Gymnemic acids
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Mental and behavioral disorders
(mood-affecting; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Mental and behavioral disorders
(obsession-compulsion; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Drug delivery systems
(powders; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Ovarian cycle
(premenstrual syndrome; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Drug interactions
(synergistic; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT Drug delivery systems
(tablets; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)
- IT 50-67-9, Serotonin, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(method for increasing serotonin levels in a person by administration
of a composition incorporating (-)-hydroxycitric acid, and related compns.
thereof)

IT 7440-47-3D, Chromium, niacin-bound 27750-10-3, (-)-Hydroxycitric
acid

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(method for increasing serotonin levels in a person by administration
of a composition incorporating (-)-hydroxycitric acid, and related compns.
thereof)

L42 ANSWER 19 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6

AN 2002:663790 HCAPLUS

DN 138:265500

ED Entered STN: 03 Sep 2002

TI Safety and mechanism of appetite suppression by a novel hydroxycitric acid
extract (HCA-SX)

AU Ohia, Sunny E.; Opere, Catherine A.; LeDay, Angela M.; Bagchi, Manashi;
Bagchi, Debasis; Stohs, Sidney J.

CS Department of Pharmacy Sciences, Creighton University School of Pharmacy
and Allied Health Professions, Omaha, NE, 68178, USA

SO Molecular and Cellular Biochemistry (2002), 238(1&2), 89-103

CODEN: MCBIB8; ISSN: 0300-8177

PB Kluwer Academic Publishers

DT Journal

LA English

CC 1-11 (Pharmacology)

Section cross-reference(s): 11

AB A growing body of evidence demonstrates the efficacy of Garcinia
cambogia-derived natural (-)-hydroxycitric acid (HCA) in weight management by
curbing appetite and inhibiting body fat biosynthesis. However, the exact
mechanism of action of this novel phytopharmaceutical has yet to be fully
understood. In a previous study, we showed that in the rat brain cortex a
novel HCA extract (HCA-SX, Super CitriMaxTM) increases the
release/availability of radiolabeled 5-hydroxytryptamine or serotonin
([³H]-5-HT), a neurotransmitter implicated in the regulation of eating
behavior and appetite control. The aim of the present study was 2-fold:
(a) to determine the effect of HCA-SX on 5-HT uptake in rat brain cortex in
vitro; and (b) to evaluate the safety of HCA-SX in vivo. Isolated rat
brain cortex slices were incubated in oxygenated Krebs solution for 20 min
and transferred to buffer solns. containing [³H]-5-HT for different time
intervals. In some expts., tissues were exposed to HCA-SX (10 µM - 1
mM) and the serotonin receptor reuptake inhibitors (SRRI) fluoxetine (100
µM) plus clomipramine (10 µM). Uptake of [³H]-5-HT was expressed as
d.p.m./mg wet weight. A time-dependent uptake of [³H]-5-HT occurred in
cortical slices reaching a maximum at 60 min. HCA-SX, and fluoxetine plus
clomipramine inhibited the time-dependent uptake of [³H]-5-HT. At 90 min,
HCA-SX (300 µM) caused a 20% decrease, whereas fluoxetine plus
clomipramine inhibited [³H]-5-HT uptake by 30%. In safety studies, acute
oral toxicity, acute dermal toxicity, primary dermal irritation and
primary eye irritation, were conducted in animals using various doses of
HCA-SX. Results indicate that the LD₅₀ of HCA-SX is greater than 5000
mg/kg when administered once orally via gastric intubation to fasted male
and female Albino rats. No gross toxicol. findings were observed under the
exptl. conditions. Taken together, these in vivo toxicol. studies
demonstrate that HCA-SX is a safe, natural supplement under the conditions
it was tested. Furthermore, HCA-SX can inhibit [³H]-5-HT uptake (and also
increase 5-HT availability) in isolated rat brain cortical slices in a
manner similar to that of SRRI, and thus may prove beneficial in

- controlling appetite, as well as treatment of depression, insomnia, migraine headaches and other serotonin-deficient conditions.
- ST hydroxycitrate appetite suppressant Garcinia ext brain serotonin uptake obesity; Super CitriMax antiobesity oral toxicity skin eye irritation depression
- IT Eye, disease
Skin, disease
(irritation; safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
- IT Adipose tissue
Appetite depressants
Dietary supplements
Feeding
Garcinia cambogia
Obesity
(safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
- IT 50-67-9, Serotonin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSRI (selective serotonin reuptake inhibitors); safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
- IT 27750-10-3, Hydroxycitric acid
RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
- IT 303-49-1, Clomipramine 54910-89-3, Fluoxetine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(safety and mechanism of appetite suppression by novel hydroxycitric acid extract)

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L42 ANSWER 20 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7

AN 2001:849120 HCAPLUS

DN 136:117853

ED Entered STN: 23 Nov 2001

TI Effect of hydroxycitric acid on serotonin release from isolated rat brain cortex

AU Ohia, Sunny E.; Awe, S. Olubusayo; LeDay, Angela M.; Opere, Catherine A.;

Bagchi, Debasis

CS Department of Pharmacy Sciences, School of Pharmacy and Allied Health Professions, Creighton University, Omaha, NE, 68178, USA
 SO Research Communications in Molecular Pathology and Pharmacology (2001), 109(3 & 4), 210-216
 CODEN: RCMPE6; ISSN: 1078-0297
 PB PJD Publications Ltd.
 DT Journal
 LA English
 CC 18-7 (Animal Nutrition)
 Section cross-reference(s): 13
 AB The authors investigated the effect of hydroxycitric acid (HCA) on basal and potassium-depolarization evoked increase in radiolabeled serotonin ([3H]-5-HT) release from rat brain cortex slices in vitro. HCA (10 μ M-1 mM) altered the baseline of spontaneous tritium efflux but had no significant effect on potassium-evoked release of [3H]-5-HT. When applied on its own, HCA (10 μ M-1 mM) elicited a concentration-dependent increase in efflux of [3H]-5-HT reaching a maximum at 300 μ M. It can be concluded that HCA can increase the release of radiolabeled 5-HT from the isolated rat brain cortex.
 ST hydroxycitrate serotonin brain cortex
 IT Brain
 (cortex; hydroxycitric acid effect on serotonin release from isolated rat brain cortex)
 IT Appetite
 Garcinia cambogia
 (hydroxycitric acid effect on serotonin release from isolated rat brain cortex)
 IT 50-67-9, Serotonin, biological studies 27750-10-3,
 (-)-Hydroxycitric acid
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (hydroxycitric acid effect on serotonin release from isolated rat brain cortex)

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L42 ANSWER 21 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:849118 HCAPLUS

DN 136:160871

ED Entered STN: 23 Nov 2001

TI Acute and long-term safety evaluation of a novel IH636 grape seed proanthocyanidin extract

AU Ray, Sidhartha; Bagchi, Debasis; Lim, Pansy M.; Bagchi, Manashi; Gross, Stephen M.; Kothari, Shil C.; Preuss, Harry G.; Stohs, Sidney J.

CS Department of Pharmacology, Toxicology and Medicinal Chemistry, Arnold & Marie Schwartz College of Pharmacy and Health Sciences, Long Island University, Brooklyn, NY, 11201, USA

SO Research Communications in Molecular Pathology and Pharmacology (2001),
109(3 & 4), 165-197
CODEN: RCMPE6; ISSN: 1078-0297

PB PJD Publications Ltd.

DT Journal

LA English

CC 1-4 (Pharmacology)

AB This study describes acute and chronic safety studies on an IH636 grape seed proanthocyanidin-containing extract (GSPE). Acute oral toxicity, dermal toxicity, dermal irritation and eye irritation studies were conducted. The LD50 of GSPE was >5000 mg/kg when administered once orally via gastric intubation to fasted male and female albino rats. The LD50 of GSPE was >2000 mg/kg when applied once for 24 h to the clipped, intact skin of male and female albino rats. In addition, 2000 mg/kg was the no-observed-effect level for systemic toxicity. In a dermal irritation study, GSPE received a descriptive rating classification of moderately irritating. Extensive chronic studies were also conducted. The effects of chronic administration of 100 mg GSPE/kg/day for 12 mo and its effects on seven vital target organs: brain, heart, intestines, kidneys, liver, lungs and spleen, and on serum chemical, were assessed in male B6C3F1 mice. Furthermore, the dose-dependent chronic effects of GSPE in female B6C3F1 mice were evaluated. Mice were fed 0, 100, 250 or 500 mg GSPE/kg/day for 6 mo and the effects on brain, duodenum, heart, kidneys, liver, lungs, pancreas and spleen, and on serum chemical, were examined. These acute studies demonstrated that GSPE is safe and did not cause any detrimental effects in vivo under the conditions of this study.

ST grape seed ext proanthocyanidin toxicity

IT Vitis vinifera

(acute and long-term safety evaluation of a proanthocyanidin-containing extract of grape seeds)

IT Proanthocyanidins

RL: ADV (Adverse effect, including toxicity); NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)

(acute and long-term safety evaluation of a proanthocyanidin-containing extract of grape seeds)

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